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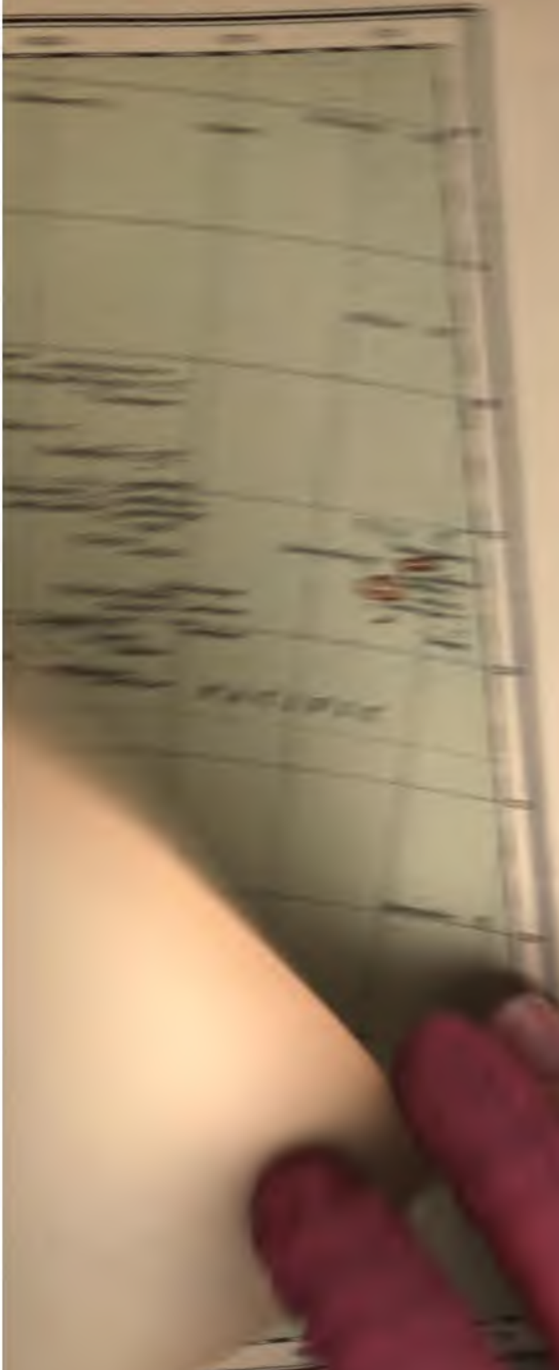

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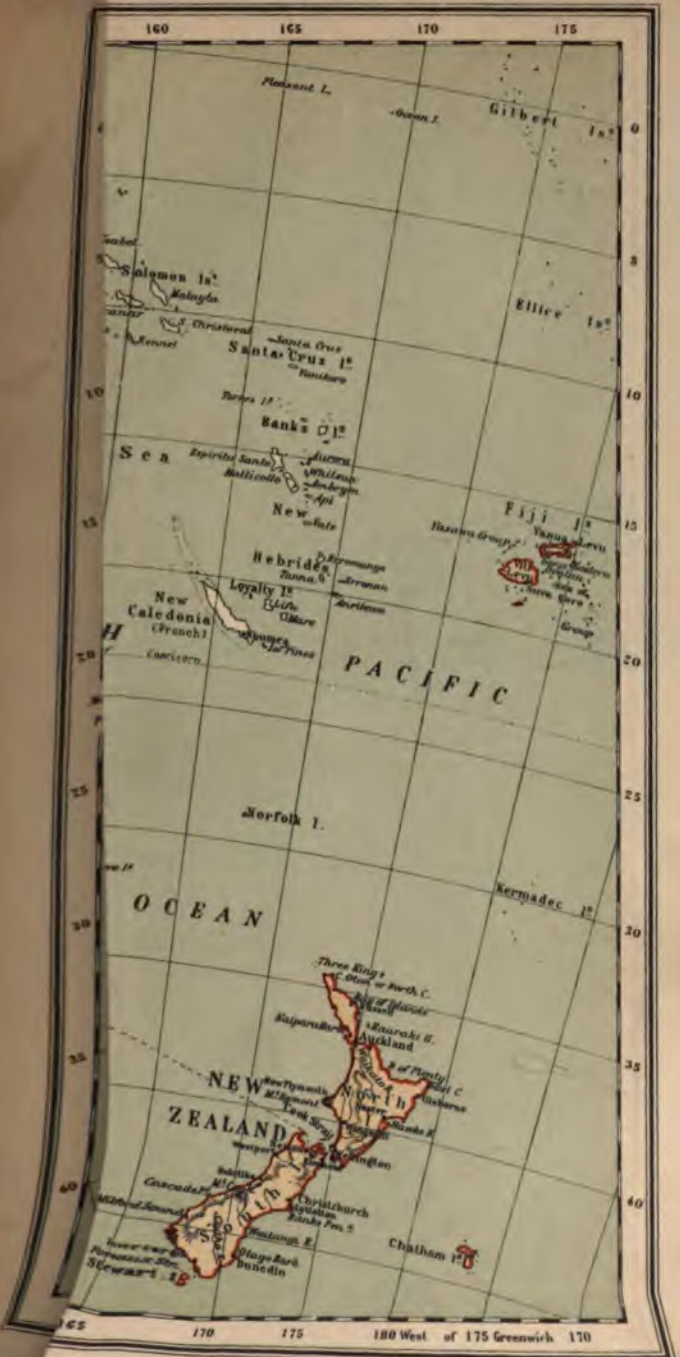
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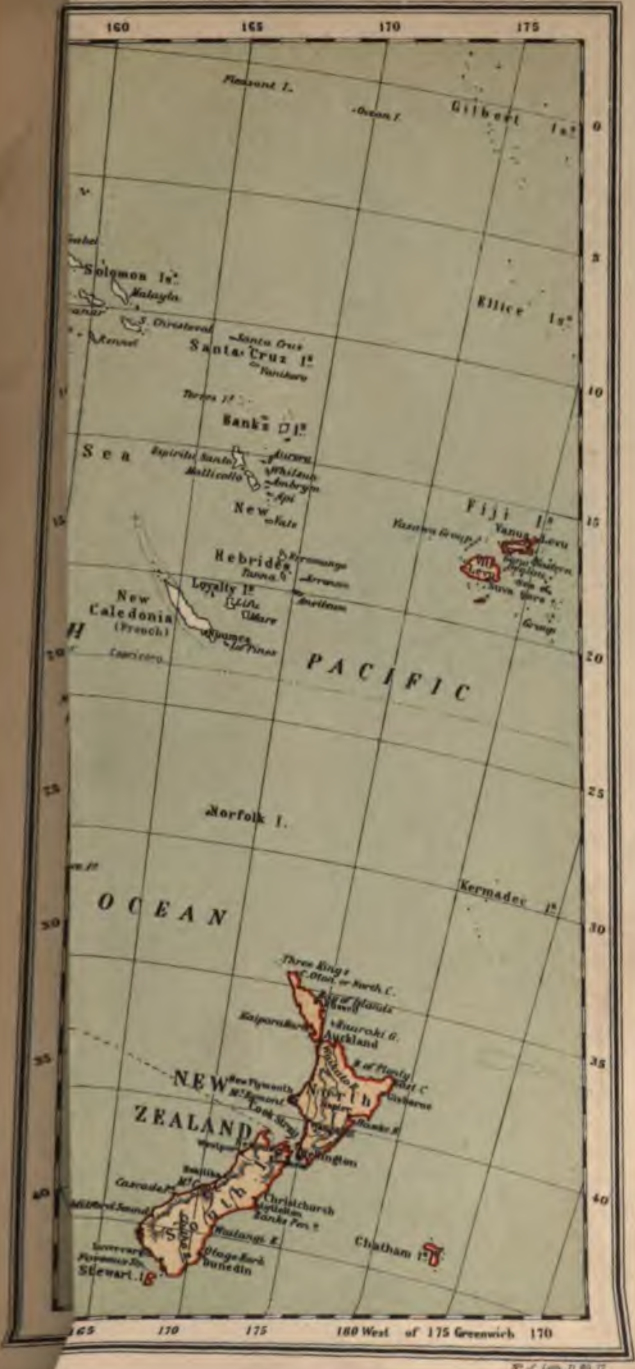

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THE

EALTH AND PROGRESS

OF

NEW SOUTH WALES

1888-89.

BY

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GOVERNMENT STATISTICIAN.

THIRD ISSUE.

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PREFACE TO THE THIRD EDITION.

THE information contained in the previous issues of this work has been revised and brought to the most recent date for the present edition. Several of the chapters have been recast and others amplified, notably those dealing with stock, food supply, employment, finance and public wealth. A chart of Australasia has been added, which will serve to illustrate the frequent references in the text, to the various Colonies of the group.

Sydney, 1st September, 1889.

PREFACE TO THE SECOND EDITION.

ON the 26th January of the present year Australasia completed its first hundred years as part of the civilized world. Viewed from the standpoint whence history is usually written, its record will appear singularly uneventful, being marked by none of those disturbing elements, which so often accompany the building up of nations, and which the historian delights to chronicle. The history of this continent is comprised almost entirely in that of its industrial progress. Twenty-five years after Captain Phillip planted the British flag on the slopes of Sydney Cove, the wealth of Australasia had reached one million sterling, in 1837 it had increased to twenty-six millions, in 1862 to one hundred and eighty-one millions, and in 1887 to one thousand and fifteen millions, reckoning only the private wealth of the people. The ratio of progress thus exhibited is probably greater than that of any other people during the first century of their national life.

The career of New South Wales, first-born of the Colonies, has not been so marvellous as that of some of her sisters, but her progress has on the whole been more uniform, so that to-day she holds the pride of place as the richest and most populous of the Australasian group—a pre-eminence due not so much to the longer period of her colonization as to the variety of her resources and the enterprise of her children. To one possessing much shall much be given; and to wealth of mines, of fertile lands and of pastures, Nature's gifts to her people, have been added peaceful days and perfect liberty. To illustrate the wealth and trace the progress of the Colony is the aim of this volume, and it is believed that no unfaithful or overdrawn picture of either has been given.

Sydney, 1*st August*, 1888.

CONTENTS.

	Page
Historical Sketch	1
Limits and Area	34
Physical Configuration	36
Climate	56
Geological Formation	61
Mines and Minerals	67
Flora	112
Fauna	129
Commerce and Shipping	140
Land and Agriculture	215
Stock	279
Food Supply and Cost of Living	325
Population and Vital Statistics	341
Employment	428
Internal Communication	468
Law and Crime	515
Constitution	546
Finance and Public Wealth	567
Instruction, Science, and Religion	653
Defence	695
Local Government	703
Social Condition and Charities	725
Statistical View of the Progress of New South Wales	741
General Index	743

Map of Australasia ... ... *facing title page*

PART I.

Historical Sketch.

Expedition of De Quiros.

THE Columbus of Australia was undoubtedly Don Pedro Fernandez de Quiros, a Spanish nobleman and navigator, who sailed in 1606 from Lima, in Peru, for the express purpose of discovering a southern continent, in the existence of which he had repeatedly expressed his confident belief. Like Columbus, he failed to sight the main land, but having succeeded in reaching a coast that stretched for a great distance north and south, he mistook it for the continent in search of which he had come, and named the land Australia del Espiritu Santo. This was one of the islands of the New Hebrides group, still known as Espiritu Santo. Sickness and discontent led to a mutiny on De Quiros' vessel, the sailors insisting so vehemently on returning to Peru, that the Admiral was forced to abandon the further prosecution of his discoveries. In company with De Quiros was Luiz Vaez de Torres, in command of another ship, named the Almirante, who after parting company with De Quiros, discovered that Espiritu Santo was only an island. Torres, being afterwards forced to bear up for the Phillipines for the purpose of refitting, discovered and sailed through the strait which now bears his name, and even sighted Cape York, which he supposed to be only another of the many small islands abounding in the neighbourhood.

Earliest charts.

Prior to the expedition from Lima, it is possible this continent was visited by navigators, the records of whose voyages have not been transmitted to us. The chart of Marco Polo would favour the supposition that the existence of a great south land was known to the Chinese; and, though the claims of De Gonneville to have discovered Australia as early as 1504 are not tenable, charts bearing the date of 1542 exist whereon is marked an extensive territory to which the name of Great Java was given, and which might have been intended to represent the north-west coast of Australia. But however valid these claims may be the merit of the Spaniard is no wise lessened.

Dutch explorers.

About the time of de Quiros' voyage the Dutch sent out an expedition from Bantam in a small vessel called the Duyfhen, which discovered the Gulf of Carpentaria. Some of the crew landed, and are believed to have been the first Europeans who trod the shore of Australia. Being attacked by the natives they were forced to abandon any attempt to explore the country; and after naming the place Cape Keerweer, or Turn-again, they departed, apparently in total ignorance of the fact that they had landed on the northern shore of a great continent. Other Dutch adventurers discovered, during the following twenty years, various parts of the coast. Dirk Hartog landed on the island now bearing his name, in 1616. Jan Carstens, in command of the yachts Pera and Arnhem, sailed along the northern shores, for a long time called Arnhem's land, in 1623. About the same time another Dutchman, Captain Edel, explored the greater part of the western coast. In 1622 a Dutch vessel, the Leeuwin, coasted along the south-west shore, from the cape which has been named after her, to King George's Sound; and in 1627 Peter Nuyts discovered the Great Australian Bight. Other Dutch explorers were Pelsart, who was shipwrecked on Houtman's Abrolhos in 1629, and Tasman, the discoverer of Tasmania and New Zealand.

Dampier's expedition.

Dampier, an English buccaneer and discoverer, also explored the west coast, from Shark Bay to Dampier's Archipelago, and the north-west coast, as far as Roebuck Bay, a distance of about nine hundred miles. This was in 1699, and he appears to have landed in several places. On his return he published an account of what he had seen. He described the country as sterile in the extreme, and almost devoid of animals, the only one of any importance somewhat resembling a racoon, a strange creature, which used only its hind legs, and, instead of walking, advanced by great bounds, or leaps, of twelve or fifteen feet at a time. This is the first notice of the kangaroo which has reached us. Dampier also describes the aboriginal inhabitants of the north-west coast in terms the reverse of favourable, which, however, apply equally to the natives of New South Wales as first seen by Captain Cook. The mention of this last distinguished man brings the narrative to the period when the real history of New South Wales, and therewith that of Australia, begins.

Voyage of Captain Cook.

The great voyage of James Cook, in 1769-70, was primarily undertaken for the purpose of observing the transit of Venus, but his instructions also mention among its objects the making of further geographical discoveries. The ship in which Cook sailed was a small vessel of 320 tons, carrying twenty-two guns. Originally built for service as a collier, she was selected for the use of the expedition on account of her unusually strong construction. This craft had been chosen by Cook himself, and was renamed the Endeavour, in allusion to the great work which her commander was setting out to achieve. Mr. Green was to conduct the astronomical observations, and Sir Joseph Banks and Dr. Solander were appointed botanists to the expedition. After successfully observing the Transit from the island of Tahiti, or Otaheite, as Cook wrote it, the Endeavour's head was turned south, and then north-west, beating about the Pacific in search of the eastern coast of the great continent, whose western shores had been so long known to the Dutch. After circumnavigating, and minutely surveying New Zealand, Cook stood due west, and in three weeks sighted the cliffs of New Holland, as Australia was then called.

The Endeavour.

Cook anchors in Botany Bay.

The first important point observed was Cape Howe, which was so named by Cook. After passing and naming Mount Dromedary, the Pigeon House, Point Upright, and Cape St. George, on the 28th April, 1770, Botany Bay was discovered, which, as it apppeared to offer a suitable anchorage, the Endeavour entered, and dropped anchor. The ship brought-to opposite a group of natives, who were cooking over a fire. Cook and his crew, unacquainted with the character of the Australian aborigines, were not a little astonished that these natives took no notice of them or their proceedings.

Even the splash of the anchor in the water and the noise of the cable running out through the hawse-hole in no way disturbed them at their occupation, or caused them to evince the slightest curiosity. But as the captain of the Endeavour ordered out the pinnace and prepared to land, the natives threw off their nonchalance; for on the boat approaching the shore two men, each armed with a bundle of spears, presented themselves on a projecting rock and made threatening signs to the strangers. It is interesting to note that the ingenious "wommera," or throwing stick, which is peculiar to Australia, was first observed on this occasion. As these men were evidently determined to oppose any attempt at landing, a musket was discharged between them, in the hope that they would be frightened by the noise, but it produced no effect beyond causing one of them to drop his bundle of spears, of which, however, he immediately re-possessed himself, and the two natives still preserved the same menacing attitude. One of them at last cast a stone towards the boat, which earned him a charge of small shot in the leg. Nothing daunted, the two men ran back into the bush, and presently returned furnished with shields made of bark, with which to protect themselves from the firearms of the crew. The intrepidity of these men is certainly worthy of passing notice. Unlike the American Indians, who supposed Columbus and his crew to be supernatural beings, and their ships in some way endowed with life, and who were thrown into convulsions of terror by the first discharge of firearms which they witnessed, these Australians were neither excited to wonder by the ship nor overawed by the superior number or unknown weapons of the strangers. Cook examined the bay in the pinnace, and landed several times; but by no endeavour could he induce the natives to hold any friendly communication with him. The well-known circumstance of the great variety of new plants here obtained, from which Botany Bay derives its name, should not be passed over. Before quitting the bay the ceremony was performed of hoisting the Union Jack, first on the south shore and then near the north head, thus taking formal possession of the territory for the British Crown.

Encounter with the Aborigines.

Discovery of Port Jackson.

After leaving Botany Bay Cook sailed northward. He saw and named Port Jackson, but, for some unexplained reason, forebore to enter the finest natural harbour in Australia. Broken Bay was also seen, but the vessel did not come to an anchor till Moreton Bay was reached. Still sailing northward, and taking notes, as he proceeded, for a rough chart of the coast, Cook passed over 1,300 miles without any event happening worthy of being chronicled, till suddenly one night at 11 o'clock the water was found to shoal, without any sign of breakers or land. While Cook was speculating on the cause of this phenomenon, and was in the act of ordering out the boats to take soundings, the Endeavour struck heavily, and fell over so much that the guns, spare cables, and other heavy gear were at once thrown overboard to lighten the ship. As day broke, attempts were made to float the vessel off with the morning tide; but these were unsuccessful. The water was rising so rapidly in the hold that with four pumps constantly going the crew could hardly keep it in check. At length one of the midshipmen suggested the device of "fothering," which he had seen practised in the West Indies. This consists in passing a sail, attached to cords, under the vessel's keel, in such a manner that the suction of the leak may draw the canvas into the aperture, and thus partially stop the vent. This was performed with great success, and the vessel was floated off with the evening tide. The land was soon after made, near the mouth of a small river, which Cook called after the ship, the "Endeavour River." A headland close by he named Cape Tribulation. The ship was steered into the river, and there careened and thoroughly repaired. Cook afterwards completed the survey of the east coast, and returned by way of Torres Straits and the Indian Ocean.

The Endeavour in danger.

Return of the Endeavour.

The favourable reports brought to England by the Endeavour on her return, and the graphic account of his voyage published by Cook, together with the fact that Great Britain had just lost her North American Colonies, by their successful rebellion, turned all eyes to Australia, or New Holland, as it continued to be called. The difficulty of disposing of their criminal population was only one of the causes which determined the Government of the day to found the colony of New South Wales; for it will become evident, as the narrative proceeds, that all concerned felt they were engaged in founding a new home in the Southern Hemisphere for the British people, and that visions of even greater progress than has yet been attained filled the minds, not only of Viscount Sydney and Governor Phillip, but also of many reflecting persons in the Colony itself. The truth of this view is amply demonstrated by the testimony of several contemporary writers; but it is nowhere more strongly emphasized than in the lines entitled "The Visit of Hope to Sydney Cove," the author of which was Darwin, whose "Botanic Garden" is well known. The lines have been often quoted; but they contain so distinct a prophecy of the greatness to which the Colony has attained that they may be appropriately introduced:

Darwin's prophetic lines.

Where Sydney Cove her lucid bosom swells,
Courts her young navies and the storm repels;
High on a rock amid the troubled air
Hope stood sublime and waved her golden hair,
Calmed with her rosy smile the tossing deep,
And with sweet accents charmed the winds to sleep;
To each wild plain she stretched her snowy hand,
High waving wood and sea-encircled strand.
'Hear me,' she cried, 'ye rising realms! Record
'Time's opening scene and Truth's unerring word.
'*There* shall broad streets their stately walls extend,
'The circus widen and the crescent bend;
'*There*, ray'd from cities o'er the cultured land,
'Shall bright canals, and solid roads expand,
'*There* the proud arch, Colossus-like, bestride
'Yon glittering stream, and bound the chafing tide;
'Embellished villas crown the landscape scene,
'Farms wave with gold and orchards blush between.
'*There* shall tall spires, and dome-capped towers ascend,
'And piers and quays their massy structure blend;
'While with each breeze approaching vessels glide,
'And northern treasures dance on every tide.'
Then ceased the nymph—tumultuous echoes roar—
And joy's loud voice was heard from shore to shore—
Her graceful steps descending pressed the plain,
And Peace and Art and Labour joined her train.

Such words as these could not have been inspired by the prospect of the "big gaol growing still bigger," which some foreign writers assert was all the Colony was ever expected to become. On the contrary they mark the prescience of those who, one hundred years ago, saw clearly what a great enterprise was being then initiated.

Viscount Sydney determines to found the Colony.

It was in the early part of 1787 that Viscount Sydney, Secretary of State for the Colonies, determined to plant a colony in New South Wales, and by May of that year the "First Fleet" had been assembled. It consisted of the 20-gun frigate Sirius; the armed tender Supply; three store ships—the Golden Grove, Fishburn, and Borrowdale; and six transports—the Alexander, Scarborough, Lady Penrhyn, Prince of Wales, Friendship, and Charlotte. The largest of these vessels measured only 450 tons, and the smallest was no more than 270 tons. On board of the six transports were packed no fewer than 564 men and 192 women, all prisoners who had been sentenced to expatriation. There were also carried 168 marines and 10 officers, commissioned and non-commissioned. These, with 5 medical men, a few mechanics, and 40 women, wives of marines, together with 13 children, the offspring of the convicts, made up the total number of persons despatched to found the Colony. Captain Phillip, R.N., was placed in command of the expedition, and also bore a commission as Governor and Captain-General of New South Wales. Second in command was Captain John Hunter, of the Sirius, and Mr. David Collins accompanied the expedition as Judge Advocate.

Sailing and arrival of the "First Fleet."

The fleet sailed at the end of May, 1787, and after calling at Rio Janeiro, arrived in Botany Bay in the beginning of January, 1788. A cursory examination convinced Captain Phillip that a more unsuitable site for a new settlement could hardly have been chosen than the shores of this bay. Despite the profusion of new plants which had so delighted Banks and Solander, the neighbourhood of Botany Bay is by no means fertile. The scarcity of good water was a further disadvantage, while the bay itself was so shallow as to forbid the ships approaching the shore, which would have necessitated the erection of piers and jetties of great length. It was besides exposed to the full swell of the Pacific, being destitute of bays, creeks, or coves of any kind. The Governor accordingly determined to explore the coast in search of a more suitable site for the settlement. After proceeding in three of the boats about nine miles, he found himself abreast of the entrance of Port Jackson, which Cook had supposed to be a mere shallow indentation of the land, fit for nothing but a landing-place for boats. Undeterred by this opinion, Phillip rounded the South Head and soon saw opening before him the whole expanse of one of the finest harbours in the world. For miles to the west stretched the peaceful waters of Port Jackson, which must have delighted the minds of the explorers, disheartened as they had been by the appearance and surroundings of Botany Bay. In place of the stunted scrub which formed the greater part of the vegetation of that locality, Port Jackson was found to be surrounded by a thick forest of noble trees, which extended to the water's edge, and promised an abundant supply of timber for building. In place of the open roadstead at Botany a countless succession of bays and inlets opened on the astonished gaze of the hardy navigators as they proceeded up the harbour. Deep water was found to extend to the very base of the rocks, thus obviating any necessity for expensive wharves, the construction of which must have occupied the little community for many months, to the neglect of more immediately pressing wants.

Discovery of Port Jackson.

Sydney Cove selected for settlement.

The Governor's choice of the site of the present metropolis of Australasia was determined by the fact that an apparently perennial stream of the purest water was found discharging itself into a beautiful sandy cove about six miles from the entrance, which was named Sydney Cove, in honour of the statesman under whose auspices the enterprise had been undertaken. Before finally deciding on this site, Captain Phillip spent three days in exploring the various bays, but was confirmed in his original choice by the fact that no such stream of water had been found elsewhere, though in other respects numerous positions equally eligible presented themselves.

La Pérouse's Expedition.

Returning immediately to Botany, preparations were made for bringing the colony round to Sydney Cove, when as the fleet were standing out of the bay an interesting incident occurred. Two strange vessels evidently making for the entrance were discerned in the offing. Captain Phillip went out in the Supply to meet the strangers, who proved to be a French exploring party under the command of Jean François Galaup, Comte de la Pérouse, their vessels being the frigates Astrolabe and Boussole. After an interchange of courtesies, the French were left to refresh and refit in Botany Bay. They stayed there till March, 1788, and buried one of their company on shore—Father le Receveur, of the Order of St. Francis, the naturalist of the expedition, who died of wounds received in an encounter with the natives of the South Seas. His tomb is still extant at La Pérouse, near the north head of Botany Bay, where also a monument was placed, in the year 1825, to the memory of the commander of the expedition, who was shipwrecked and whose crew were murdered on the Santa Cruz Islands. The monument was erected by Messrs. De Bougainville and Ducampier, commanding the French war vessels, Thétis and Espérance, then lying in Port Jackson.

Foundation of the Colony.

On Captain Phillip's arrival in Sydney Harbour, on the memorable 26th January, 1788, the ships anchored in the Cove, and preparations were at once made for landing the colonists. The clearing of the ground in the vicinity, and along the banks of the little stream, was commenced, and when a sufficient space had thus been obtained a flagstaff was erected, and the Union Jack run up. After the firing of three volleys by the marines, the Governor read his commission, and addressed words of counsel, warning, and encouragement to the prisoners, the ceremony closing with general festivity. Arduous labour succeeded this scene, for it was well understood that unless the settlers could raise supplies for themselves, the existence of the Colony would be precarious, as the store of provisions in their possession was calculated to last only a very short time.

Farming first attempted.

Accordingly ground was cleared at the head of Farm Cove, adjoining the settlement, and an attempt made to raise wheat, but time has shown that the soil in the immediate neighbourhood of Sydney is not suited to the cultivation of this cereal, and even if a good crop had been obtained the colonists must have starved while it was maturing. No food worth mentioning was procured from the land, and the little community was on the brink of starvation, when a ship arrived with another batch of colonists, but without stores. This brought matters to a climax, whereupon Governor Phillip sent the Sirius to the Cape Colony, and the Supply to Batavia, to procure provisions, which, however, could only be obtained in insufficient quantity, so that in a few weeks after the return of these vessels the state of affairs became as bad as before, and starvation again stared the Colony in the face. Under these circumstances, everyone, including the Governor himself, was placed on short allowance, and even the sheep and cattle which had been reserved for breeding purposes were killed for food. In this aspect of affairs the Governor bethought himself of Norfolk Island, whither, shortly after his arrival, he had sent Lieutenant Philip Gidley King, of the Sirius, to establish a branch colony. A detachment of 200 convicts, with a guard of 70 marines, was, therefore, despatched to the island. On arrival they found that King and his men had cleared a considerable portion of land, and had succeeded in raising an abundant crop. But the Sirius, in which the new detachment sailed, was wrecked on a reef off the island, so that no supplies were procured thence at that time.

The "Second Fleet."

When the prospects of the settlement at Sydney Cove had reached their gloomiest, the "Second Fleet," consisting of three store-ships, arrived, and snatched the Colony from the very brink of destruction by famine. This tided over the difficulty, and so great a privation of food was never again experienced. Fresh difficulties, however, beset the settlers by the arrival of some ship-loads of immigrants, most of whom were in a sick and dying condition. Of 1,700 men and women who had been embarked, 200 died on the voyage, and several hundred more were found to be *in extremis* on arrival. In the midst of these horrors the Governor's responsibilities were further increased by the attempts of some of the prisoners to escape from the Colony. Some took to the bush, others stole boats and put to sea, intending to reach the Dutch settlements in the Indian Ocean. Daring as this latter attempt may appear, it was in one instance successful; two men and a woman, in an open boat, succeeded in reaching Timor, where they were imprisoned and sent back to Sydney on the first opportunity. Numerous efforts were made to escape from the settlement by land, the ignorance of the convicts being such that many imagined they could walk overland to China, and not a few perished in the bush while making the attempt.

Escape of prisoners

Governor Phillip's health gave way under the care and anxieties of his office, and in 1792 he returned to England, where in reward for his exertions in founding the Colony he received a pension, and died at an advanced age. Major Grose and Captain Paterson, officers in charge of the military, administered the Government till the arrival of his successor. In 1795, Captain Hunter, who after the loss of the Sirius had gone to England, arrived as the second Governor. With the arrival of Governor Hunter affairs took a new turn. He brought out a number of free settlers, mostly farming men; and some fine alluvial land having been discovered on the banks of the Hawkesbury, farming was successfully started, and in a short time more than 6,000 acres were under crops of wheat and maize. The attempts to introduce cattle were for a time unsuccessful, but in 1796 a herd of 60 head was discovered at the "Cowpastures," near Camden. These were the descendants of some cattle which had strayed from the settlement several years before. Though their quality was found to have deteriorated, they proved a very welcome addition to the live stock of the settlement. In 1800, when Captain Hunter left the Colony, the population was over 6,000; attempts had been made to penetrate into the interior, but without success; the Hunter River and its coal-

Departure of Phillip.

Farming enterprise initiated.

mines had been discovered, and the mines were being worked by a detachment of prisoners; the city of Newcastle had been founded, and the New South Wales Corps, a military body enlisted for service in the colony (the first detachments of which had arrived in 1790), formed an efficient garrison, and guard over the more refractory prisoners. During Governor Hunter's term of office Bass and Flinders minutely examined the coast to the south of Sydney, in a small boat only 9 feet over all; and the former discovered the strait which bears his name, thus proving Tasmania to be an island, and not the southern extremity of the continent, as previously supposed.

Newcastle founded.

Governor King.

The next Governor was Philip Gidley King, previously mentioned as the Lieutenant of the Sirius, who was despatched by Phillip to found a settlement on Norfolk Island. Though all fears of famine had now disappeared, Governor King soon found himself involved in difficulties of a scarcely less distressing nature. To explain these it will be necessary to describe the constitution of the New South Wales Corps. This body had been specially raised for service in the Colony, the officers of the King's regiments not unnaturally objecting to be sent to such a far distant settlement, where they knew that they would find no intellectual occupation, and where their sole work would consist in acting as a prison guard, or, at most, in making a few raids, in alleged reprisals for the misdeeds of the illused, and often sorely provoked, aborigines. As a military guard of some sort was necessary, this corps was raised, and a few enterprising spirits—many of whom had never served before—were induced to accept commissions, with the view of obtaining grants of land and making their fortunes in the Colony. Unfortunately, the readiest means to this end was found in the import trade, and as rum was in great request, the officers of the New South Wales Corps became importers of that spirit in large quantities, and even set up private stills, in defiance of a Government order to the contrary. As an instance of the enormous profits made in this trade, it may be mentioned

Traffic in spirits.

that the retail price of rum, on the arrival of Governor King, was £2 per gallon, 7s. 6d. to 10s. being the utmost cost to the importer. To put a stop to this state of things—in which the officials and rulers of the Colony were really doing their best to debase those committed to their charge—a clause was inserted in the instructions of the new Governor, as follows:—"You are to order and direct that no spirits be landed from any vessel coming to Port Jackson without your consent." In consequence of this order, King proceeded to act promptly, and when he left the Colony in 1806, he had sent away no less than 69,484 gallons of spirits, and 31,293 gallons of wine. The quantity which he allowed to be landed was sold, by his order, at various prices, the maximum not exceeding 10s. per gallon. It may be easily imagined what a storm such vigorous proceedings caused among the importers, and how embittered the officers of the New South Wales Corps became against the Government.

Suppression of the "Rum currency."

During King's time a serious mutiny occurred among the prisoners. The more tractable of the convicts were "assigned" as servants to the settlers, and engaged in working the farms and squattages, but the more desperate characters, made desperate in many instances by the treatment they received, were worked on the roads, in chain-gangs. A party of over 300 of these chain-gang men was employed at Castlehill, on the road between Parramatta and Windsor. These men, taking advantage of the small number of their guard, abandoned their work, managed to remove their irons, seized some firearms, and marched towards the Hawkesbury, expecting to be reinforced by the men employed in that neighbourhood. Major Johnston, second in command of the New South Wales Corps, pursued them, however, with only twenty men, and on coming up with them, charged with such precipitation that the mutineers were fain to lay down their arms and beg for mercy. Three or four of the ringleaders were afterwards hanged, and the rest were permitted to return to their duty on undertaking to be of good conduct for the future.

The Castlehill Revolt.

Initiation of wool-growing.

An event of the utmost importance to the Colony also took place under the administration of Governor King. This was the initiation of wool-growing. John Macarthur, who had held a commission as captain in the New South Wales Corps, procured, by great trouble and perseverance, some Spanish merinos, and having obtained a grant of 10,000 acres of land across the Cowpasture River, which estate he named "Camden," commenced the growth of wool on a large scale. In a short time his enterprise showed every sign of a successful issue, to the great benefit of the Colony generally, and his own personal advantage. In spite of these evident signs of material progress Governor King was so worn out with the conflicts caused by his endeavours to suppress the rum traffic, and in such constant collision with the officers of the New South Wales Corps on that account, that he seized the first opportunity of leaving the Colony, and was succeeded in the Government in 1806, by William Bligh, a post-captain in the navy.

Governor Bligh.

Governor Bligh was a distinguished naval officer. His wonderful voyage after the Mutiny of the Bounty had caused the Imperial Government to entertain a high opinion of his conduct, as well as his courage and determination. His services were numerous, and he had been publicly thanked by Lord Nelson, after the bombardment of Copenhagen, for the gallantry and skill which he displayed on that occasion. Hence he was selected as a fit man to crush the clique of officers engaged in the rum traffic, and to purify official life in the Colony. King had been only partially successful in this direction, and the British Government, in the belief that he had been too yielding, or at least not physically able to put down the traffic, gave the strictest injunctions to Captain Bligh to stop the trade in spirits. Accordingly in March, 1806, he issued the following general order :—"His Excellency the Governor laments to find by his late visit through the Colony that the most calamitous evils have been produced by persons bartering, or paying, spirits for grain of all kinds, and the necessaries of life in general, and to labourers for their hire; such proceedings depressing the industrious and depriving the settlers of their comforts. In order, therefore, to remedy these grievous complaints, and to relieve the inhabitants, who have suffered by the traffic, he feels it his duty to put a total stop to this barter in future, and to prohibit the exchange of spirits or other liquors as payment for grain, animal food, wearing apparel, or any other commodity whatsoever, to all descriptions of persons in the Colony and its dependencies."

This order is in itself sufficient to indicate to what fearful lengths the "rum currency" had been carried. Naturally it would have been expected that all respectable people, the military and ex-military especially, would have joined the Governor heart and soul in his efforts to put a stop to the traffic, and induce a more healthy state of things. Such, however, was not the case; and the struggle in respect to the illicit trade continued throughout the whole period of Bligh's governorship.

Embittered relations between the Governor and settlers.

Other matters embittered the relations between the Governor and the colonists, and in these Bligh was not so obviously in the right as in his attempt to put down the contraband traffic in spirits. The contest reached its climax on the arrest of John Macarthur, whose efforts to promote the growth of wool have been alluded to. That gentleman had become specially obnoxious to the Governor; and as he was also the chief trader in the community, he was selected as a scapegoat for the sins of the rest. Matters were brought to a crisis in the following manner, though the immediate circumstances of his prosecution had no direct connection with the barter of spirits. Mr. Macarthur had been part owner of a vessel that traded to Tahiti for salt pork and other articles, for the supply of the Colony. At a time when this vessel was lying in Port Jackson, he received a summons from Mr. Atkins, the Judge Advocate—that is, Chief Justice—to appear before him to answer to a complaint on the part of the crew of his vessel of withholding from them their wages, in consequence of which they alleged that they had been compelled to break through the port regulations, by coming ashore without special order. Macarthur returned an answer in writing, explanatory of his conduct in the matter, but did not obey the summons by appearing in person. This was construed to be an act of contumacy, which some attributed to a feeling of personal resentment towards the Governor, engendered by the action of the latter against the "rum currency."

Arrest of Macarthur.

A warrant was accordingly issued for Macarthur's apprehension, and on the 25th January, 1808, he was brought before the Judge Advocate and a military jury of six, consisting of officers of the New South Wales Corps—such being at the time the composition of the Supreme Court of the Colony. Mr. Macarthur objected to the Judge Advocate sitting on his trial, on the ground that he bore him personal ill-feeling, for which assertion it would appear that there was some foundation, especially as Atkins's adviser throughout the whole proceedings was one George Crossley, a transported attorney, who is believed to have been an enemy of Macarthur. Be this as it may, the Judge Advocate refused to abdicate his position, and the Governor declined to supersede him, for which, indeed, he had no authority, Atkins having been appointed by the British Government.

Conduct of the military officers.

At this juncture the Governor summoned the six officers to his presence, to explain their conduct in supporting Macarthur's protest and refusing to sit with the Judge Advocate, but they declined to obey. The Governor also sent several times during the next day to Major Johnston, the Commandant, at his residence at Annandale, asking him to confer with him as to the conduct of his subordinates. That officer, however, declined to come to town, on the plea of ill-health. This was an evident subterfuge, for between 6 and 7 p.m. on the same day (the Anniversary of the foundation of the Colony) he suddenly made his appearance in the Barrack Square, where, if we may believe his statement, he found everything in a state of ferment and confusion, and himself beset with the clamours of a number of the leading inhabitants, civil as well as military, calling upon him to put the Governor under arrest. He accordingly marched at the head of his regiment, Deposition of Bligh.

with drums beating and colours flying, to Government House, and Governor Bligh was put in close confinement in his own residence. Johnston thereupon assumed the Government, his first act being to suspend the Judge Advocate, the Commissary, the Provost-marshal, the Chaplain, and other principal officials, and to appoint others to act in their place.

Major Johnston continued to administer the Government till his Lieutenant-Colonel (Foveaux) superseded him, as the senior officer in the Colony, and eventually Colonel Paterson came from Tasmania and assumed the direction of affairs. Both these officers approved Johnston's proceedings, but the latter set Bligh at liberty after a detention of twelve months, on condition of his proceeding straight to England, in a vessel which was then ready to sail. Bligh promised to do so, but called at Tasmania on his way, where the military authorities attempted to detain him, but he escaped their hands.

Johnston tried by Court-martial.

News of the affair had meanwhile reached England, and the Government was very much concerned at the proceedings of the military, and had despatched Lieutenant-General Macquarie to the Colony as Governor. His instructions were to reinstate Governor Bligh for twenty-four hours, to assume the government himself, and to send Johnston home under close arrest. Bligh could not be reinstated, as he had left Sydney; so Macquarie's first act was to arrest Major Johnston, who was subsequently tried by court-martial and sentenced to be cashiered, the leniency of the sentence being such as to call forth special remark from the Prince Regent, in a minute appended to the proceedings distinctly stating that it was not to be drawn into a precedent. Johnston afterwards returned to the Colony, and died at his estate at Annandale.

Arrival of Macquarie.

With the arrival of Governor Macquarie, the colony entered on a stage of decided progress. The final abolition of the traffic in rum was followed by a marked improvement in the morals of the population. Schools were established, and the children, who had hitherto grown up in total ignorance, were taught to read and write, and instructed in useful handicrafts. An impetus was given to exploration, and the dwellings of the settlers in the bush were much improved by the efforts of the Governor during the annual tours which he made through the Colony. Churches and public buildings were erected, asylums founded, and a better tone was given to society generally by the exertions of this philanthropic governor, ably seconded by the endeavours of his high-minded wife, who laboured to improve the condition of her sex and the children in the Colony. Among the many beneficial works undertaken by Macquarie, by far the most important was the road over the Mountains, via Lapstone Hill and Mount Victoria, to Bathurst. After many attempts to penetrate the Coast Range, it was at last successfully crossed in 1813 by Blaxland, Wentworth, and Lawson, names memorable in the annals of the Colony. An account of the expedition will be found in another place.

Schools and Churches opened.

Macquarie's policy.

Another distinguishing feature in Governor Macquarie's policy, which was almost as beneficial as his efforts to instruct the population in religion and morality, and to open up the country, was the favour with which he treated the "emancipists," that is, those convicts who had become free by serving out their sentences. When it is remembered that the majority of those transported had been guilty of petty offences only, or of acts which would not in these days be deemed offences at all, the Governor's determination to give every encouragement in the way of official recognition to emancipists must be strongly commended. To transport a person for a petty offence, to ostracise him for the rest of his life, and to extend the social ignominy to his children was in the highest degree unjust; and Governor Macquarie, as a humane man, set his face against the custom. In religious matters he showed a largeness of mind, in advance of public opinion, by removing, as far as lay in his power, the religious disabilities under which a large section of the colonists laboured. In 1821, after a longer term of office than has been allotted to any Governor either before or since, Governor Brisbane.

"L. Macquarie, Esq.," as he modestly styles himself in the inscriptions on the public buildings he erected—discarding the prestige attaching to his military rank—left the Colony, to the regret of the entire population, and was succeeded by Sir Thomas Brisbane.

Free Immigration encouraged.

Trial by Jury introduced.

The new Governor trod in the steps of his predecessor. He carried on the work of exploration, and in 1823 despatched Mr. Oxley, Surveyor-General, to survey Moreton Bay, Port Curtis, and other parts of the north-eastern coast-line. Oxley discovered a river debouching into Moreton Bay, which he named after the Governor, and a town was founded on its banks, also named Brisbane, which has become the capital of the Colony of Queensland. The Murray and Murrumbidgee Rivers were discovered soon afterwards by Hovell and Hume, who had formed an exploring party under the auspices of the Governor. The immigration of free settlers was much encouraged by Sir Thomas Brisbane, the result being the arrival of numbers of young men, many possessing capital, who became squatters, and soon wrought an important change in the Colony, by causing the costly Government farms to be broken up. As a consequence the wants of the community were more cheaply and better supplied by private enterprise. Censorship of the press, which had been strictly enforced up to this time, was abolished by Governor Brisbane, by proclamation dated 15th October, 1824. Trial by jury was introduced about the same period, by which the privilege of being tried by his peers was extended to every man, the assessors to the judge before that time having been chosen exclusively from officers in the army. Sir Francis Forbes, the first Chief Justice, was mainly instrumental in introducing this great and salutary change in the administration of the law. The first normally constituted jury sat at the November Quarter Sessions of 1824. An Act had also been passed by the Imperial Parliament, in 1823, which conferred another most important privilege on the Colony. It was provided that the Governor should nominate a Legislative Council of seven members, by whose advice he was to be guided. Previously to the appointment of this Council the Governor had been virtually absolute in power, the only check upon him being the public opinion of the colonists and the authority of the British Government, as represented by the Secretary of State for the Colonies. This Council of Seven was really the nucleus around which have gathered our present Constitution, and the liberties we now possess. It was the first step, in which, says the proverb, all the difficulty consists; and yet it was only after much agitation that even this modicum of justice was conceded.

Governor Darling.

The next Governor was Sir Ralph Darling, who, finding the Colony in the state of progress above described, by a series of blunders nearly succeeded in marring the beneficial result of the efforts of his predecessors. Arriving in Sydney in 1825, he soon became involved in very serious disputes with the colonists and the press. In order to meet the criticisims of the latter, a number of Acts were passed by the Council, which had the effect of stifling obnoxious comments for the time. One good result which sprang indirectly from these arbitrary acts was the enlargement, in 1828, of the Legislative Council from seven to fifteen members. The "Bushranging Act" was passed by this Council to put down a prevalent nuisance—the gangs of escaped prisoners who infested the principal roads and robbed allcomers without distinction.

Exploration.

The work of exploration made some progress in Governor Darling's time, the famous journeys of Captain Charles Sturt being undertaken under his sanction. Other explorers were Allan Cunningham, Hume, and George Macleay, son of Alexander Macleay, the Colonial Secretary of that day.

French settlements suspected.

It was strongly suspected at this time that the French had an idea of forming settlements in Australia. French ships constantly appeared off the coast, ostensibly fitted out for the purpose of making geographical discoveries, but really, it was believed, to found a colony in any Australian territory which they might find unoccupied. To frustrate this suspected design, Darling despatched two expeditions, in 1826, to King George's Sound and to Western Port, in which neighbourhood it was surmised the French were hovering. To show that there was some ground for these fears, chimerical as they may now appear, it will be sufficient to quote the Governor's instructions to the officers in charge of the expeditions. He says:—"Should you find the French already in occupation, you will, notwithstanding, land the troops, and signify to the Frenchmen that their continuance with any view of establishing themselves, or colonization, will be considered an unjustifiable intrusion on his Britannic Majesty's possessions." No Frenchmen, however, were found at either of the places named, and settlements were therefore promptly formed at Western Port, King George's Sound, and Swan River, in Western Australia. When Governor Darling left the Colony in 1831, much progress had been achieved, in spite of the newspaper war, and his personal unpopularity, the population having reached over 51,000 for the whole of New South Wales, while the value of the total exports was £500,000.

New settlements formed.

The unpopularity of Governor Darling gave a factitious advantage to his successor, Sir Richard Bourke, even before his sterling qualities had become known. Sir Richard Bourke may be said to have been the real founder of our present free institutions, as, under his rule, the foundations of the Constitution we now enjoy were well and firmly laid, on the solid basis of full and equal rights to all, whatever their sect or belief, and whether emancipist or originally free. Immigrants began to arrive in large numbers, under a policy of assisted immigration, which was then first commenced. The first vote in aid of immigration was made by the Legislative Council at Bourke's suggestion, and the British Government doubled the amount given by the Colony. Under that system the first batches of immigrants to arrive were fifty young women from an orphan school in Cork, and fifty-nine mechanics from Scotland, whom the Rev. Dr. Lang introduced to aid him in building the Australian College.

Governor Bourke.

Assisted Immigration initiated.

Establishment of Religious Equality.

But the great achievement of Sir Richard Bourke's reign was the establishment of religious equality, and the breaking up of the monopoly of Government aid enjoyed by one communion. For his services in the cause of liberty, in this and other instances, a movement was set on foot after his departure—which took place in 1837, twelve months after the passing of the Church Act—to erect a statue of him in Sydney. Mr. Westmacott was commissioned to design a figure of Sir Richard in bronze, which, together with a granite pedestal, arrived in Sydney in 1842. It was erected where it now stands, at the Macquarie-street entrance to the Domain, opposite to the Public Library, and was unveiled on the 11th April, 1842. A general holiday was proclaimed on the occasion, and the assemblage was the most numerous which had up to that time gathered, for any purpose, in the metropolis. The succeeding Governor, Sir George Gipps, delivered a speech, laudatory of his predecessor, in whose steps he said he was resolved to tread. This was the first statue ever set up in Australia. It was no more than a fitting tribute to the virtues of the Governor, and serves even now as a reminder of the new order of things which he introduced.

Governor Gipps.

Free grants of land abolished.

Free grants of land were abolished at this time. All land in the settled districts was put up to auction at an upset price of 5s. per acre, except in the Port Phillip district, where £1 per acre was fixed as the lowest price, on account of the fitness of the land for agriculture. Beyond the settled districts the runs of the squatters, whose boundaries had hitherto been undefined, were marked out, and a small rent charged, in return for a partial fixity of tenure, the squatters having previously been liable to be turned out at any time.

Sir Thomas Mitchell's explorations.

The famous expeditions of Sir Thomas Mitchell, who had succeeded Oxley as Surveyor-General, were undertaken during Bourke's tenure of office. The first was to the north, as far as Liverpool Plains; in the second, the country between the Bogan and the Macquarie was surveyed; and in the third, the course of the Darling was traced, from its source to its junction with the

Murray. In the fourth, Mitchell discovered the rich lands of Victoria, which so enraptured him that he named the country Australia Felix.

Transportation abolished.

The reign of Sir George Gipps was marked by the abolition of transportation. The system of assigning convicts as servants to the settlers had ceased in 1838, and transportation itself was abolished by an Order in Council in 1840, though an attempt was made to revive it nine years later, an account of which will be given in due course. For many years previous to its abolition, the system of transportation was viewed with great disfavour by the colonists, and a powerful league was formed as early as 1830, to bring about its cessation. During the fifty-three years when New South Wales was open to receive British prisoners, the number of convicts sent to Sydney was 83,290, of whom 70,928 were males and 12,362 females. At the census of March, 1841, there were in the colony 18,248 persons, 14,718 males and 3,530 females, originally bond, but free by servitude or emancipation—and 24,489 persons, 21,367 males and 3,122 females, whose period of servitude had not expired. It would therefore appear that out of the total number of convicts sent to the Colony, 42,737 remained at the abolition of the system of transportation, while 40,553 had either been removed by death or had left the settlement.

Legislative Council established.

The great event of Governor Gipps's time was undoubtedly the introduction of a new Constitution, by the establishment of a Legislative Council composed of thirty-six members, twelve nominated by the Crown, and the remainder elected by those who were placed on the electoral roll, a small property qualification being required. The new Council met on 1st August, 1843.

Commercial crisis.

A great commercial crisis followed soon after the introduction of the new Constitution, so that the subject of paramount importance which engaged the attention of the Legislature was the financial condition of the Colony. The cessation of transportation had, of course, caused the withdrawal of large sums of British money, which used to be spent on public works and in maintaining the prison establishments, and the military necessary to guard them; and much distress was also caused by an unwise interference on the part of the Imperial Government with the land laws. The commercial depression which supervened was very serious. The price of land and stock came down to zero. Sellers were many, but buyers were few. The price of sheep fell in the most alarming manner, 1s. per head being a common price. Mr. O'Brien, who occupied a run in the Yass District, at length hit upon the happy idea of boiling down sheep for tallow, for which at the time there was a good market in Europe; and the price of sheep was thus raised to 3s. or 4s. a head, five shillings' or six shillings' worth of tallow being obtainable by the process of boiling-down.

Boiling-down introduced.

The Legislative Council, imagining that the very existence of the Colony was threatened by the state of things prevailing, sought to "avert ruin"—to use their own expression—by "pledging the public credit," but the Governor refused the Royal assent to the Bill passed for that purpose. It was then proposed to issue Treasury Bills, but the Council would not entertain the idea. The failure of the Bank of Australia, the liability of whose shareholders was unlimited, brought affairs to a crisis, and it was proposed to relieve the shareholders of their liability by a Bill empowering the bank to dispose of its assets by a public lottery. No attempt was made to defend lotteries in general, but it was contended that if the goods of proprietors of the bank were seized under executions, the bailiff would be seen in possession of one house in ten in Sydney, and that the result would be a panic, which would annihilate the value of property. Under pressure of such an argument as this the "Lottery Bill" passed, but was disallowed by the British authorities. The necessity of the case was so urgent, however, that the lottery took place, and was successfully completed before the law officers of the Crown could interfere to prevent it. Desperate diseases require desperate remedies, and the lottery was, no doubt, in the main beneficial.

The Bank of Australia Lottery.

Separation of Port Phillip.

The first agitation for the formation of the Port Phillip district, into a separate colony, took place towards the close of Governor Gipps's administration, and the claims of the trans-Murray residents to govern themselves were ably advocated by Dr. Lang, one of the six members returned by the district since known as the Colony of Victoria. The entire population of what is now New South Wales, Victoria, and Queensland did not, at that period, exceed 150,000, of which the Port Phillip district contributed only 30,000. Their distance from the seat of Government, nevertheless, justified the demand of the Victorians for separation, which was conceded in 1851, to their great permanent benefit. A few years subsequently, on the 1st December, 1859, the colony was again dismembered, losing its northern province, which was constituted a separate colony, under the name of Queensland.

Governor Fitzroy.

Sir George Gipps was succeeded as Governor by Sir Charles Augustus Fitzroy, in whose tenure of office occurred several of the most important events in the history of Australia. These, in the order of their happening, were the final abolition of transportation in 1849; the separation of Victoria in 1851; the discovery of gold in the same year, and the establishment of Responsible Government in 1855–6.

Attempt to revive transportation.

Prisoners had ceased to be sent to New South Wales in 1840, but owing to the great depression of trade which prevailed during the rule of Governor Gipps, station properties, in 1849, so depreciated in value as to threaten ruin to their holders. Many of the squatters thought that a revival of the system of assigned servants would be beneficial to their interests, and, as it happened, the Imperial Government wished at that time to possess once more a large penal colony. Two powerful interests therefore were allied in an effort to re-establish transportation, and the system of assigned servants. To meet this threatening combination, a number of public meetings were held in Sydney under the auspices of the Anti-transportation League, and an overwhelming expression of popular opinion, most vehemently adverse to the scheme, was

Attempt to revive transportation.

given; nevertheless the British Government, under the advice of Sir Charles Fitzroy, persisted in their endeavours to force prisoners upon the unwilling inhabitants of the Colony. Several ship-loads of convicts were accordingly sent out, and an attempt was made to land them in the first instance at the new settlement at Port Phillip, now the City of Melbourne. The settlers there, however, would not tolerate the proceeding, whereupon the ships were compelled to leave for Sydney and Moreton Bay, now Brisbane. One of the vessels, named the Hashemy, cast anchor in Port Jackson, and there immediately ensued a serious contest between the inhabitants and the Executive. Immediately on the fact becoming publicly known that the Hashemy was off the Heads with convicts on board, the people of the metropolis were lashed into a fever of excitement, and a great public meeting was forthwith convened to consider what steps should be taken in this pressing emergency, as it then was universally considered.

Landing of convicts forbidden.

The result was that the Government saw fit to forbid the landing of the prisoners at that time, not caring to face the obloquy and public indignation which the adoption of any other course would certainly have brought upon them. As, however, the Hashemy could not be sent back, and as her prisoners could not permanently remain on board, a compromise was entered into. The prisoners were removed from the ship, and a large batch sent to Moreton Bay, in order that the settlers in that district might have an opportunity of hiring them. The remainder were allowed to be assigned to various persons in the Colony, though it was stipulated that the men should not be landed in Sydney, nor employed in the county of Cumberland.

The Legislative Council afterwards proceeded to take action in the matter, and a resolution was proposed, to the effect "that an address be presented to Her Majesty, praying that the Order in Council which declared New South Wales a Colony to which convicts might be sent be at once revoked." The adjournment of the Council was, however, agreed to before the motion could be put. In consequence of this partial shelving of the question an

Anti-transportation meetings.

overwhelming public meeting was held, which petitioned the Council to use its utmost endeavours to prevent the revival of transportation in any form. The petition in a short time was signed by over 35,000 persons (more than two-thirds of the population of the metropolis). There was no resisting this manifestation of public opinion, and the pro-transportation members temporarily withdrew from the Council, whereupon the motion stated above was carried unanimously, and the address to the Queen was accordingly transmitted. The Order in Council was revoked, and transportation to New South Wales was thus, after many years of fretful agitation, absolutely and finally abolished. The discovery of gold, which shortly followed, gave a new impetus to Australian society, and by developing the industry and wealth of the country rendered a return to the "prison times" for ever impossible.

Final abolition of transportation.

Discovery of gold.

The discovery of gold, in 1851, was by far the most important incident which had yet occurred in the annals of the country. An account of that remarkable event will be found in its proper place, but a few remarks are here called for as to the historical bearing of the great discovery. For many years previous to 1851 it was known that small quantities of gold had been found in the Bathurst district, and a colonist offered, during the administration of Sir George Gipps, to conduct the Government surveyors to a spot where he said gold existed in payable quantities. The project was, however, discouraged. The Colony was enjoying at the time a period of great prosperity, the depression of previous years having been successfully tided over; and it was probably thought unadvisable by the authorities to disturb the settled industries of the Colony, by the incitement to speculation which the gold fever would generate.

Gold fever.

A few years passed away, and the recollection of the supposed gold discoveries was still fresh in men's minds. The prosperous days with which Governor Gipps's administration closed gave place to less fortunate times. Wages were low and work scarce, when suddenly the tale of the gold discovery was on every tongue.

The first nuggets.

In the early part of 1851 nuggets began to arrive in Sydney. They had been found in the vicinity of Bathurst, and their inspection by the public raised a wave of excitement, which affected all classes. It is not surprising that the possibility of amassing a fortune in a few months—which seemed indisputable from the presence of so many specimens of gold—should have induced hundreds of people of all ranks to abandon their employments, and set out for Bathurst. Nor could news of such a nature be confined within the Colony, and before many months had elapsed, the presence of gold in Australia was known all over the world. Then followed a mighty rush, from every quarter of the globe, of the most enterprising spirits, and those physically the most capable of enduring the unknown hardships before them, a circumstance on which Australians in the future will have occasion to congratulate themselves, for the splendid physique of the early colonists, already manifested in their sons and daughters, must undoubtedly become the inheritance of succeeding generations.

Effects of the discovery of gold.

The effect produced on society by this most fortunate discovery, was unpleasant enough at first. Stations throughout the Colony were left without hands, and all ordinary occupations were threatened with extinction, in consequence of the general exodus to the gold-fields. The squatters even petitioned the Government asking that martial law might be proclaimed, and all gold-digging peremptorily prohibited, in order that the ordinary industrial pursuits of the country should not be interfered with. The Governor however, refused to accede to this manifestly absurd request. So great a change in the circumstances of the country as that wrought within so short a time by the gold discovery, could not fail to affect many persons prejudicially. But after a few years, affairs resumed their normal course, and gold-mining found its level as one of the ordinary industries of the country. But the great and permanent benefit which resulted from the influx of an enterprising population, the increase of wealth, and the consequent development of many other industries cannot be overrated.

Nothing, since the introduction of wool-growing, has tended to develop its resources and to make so widely known the great advantages which Australia offers to the overcrowded populations of the Old World, as the discovery of gold in 1851. Since that era the country's progress has been by leaps and bounds, and Australia, which was before regarded merely as a far off dependency of Great Britain, now takes a place amongst the nations of the world, and is in a fair way of realizing the prophetic visions of future greatness which inspired its founders.

Events preceding Responsible Government.

The series of events which led to the introduction of Responsible Government still remains to be touched upon. With a narrative of these, and an account of the actual inauguration of representative institutions—that is, with the political occurrences of 1855—this narrative will fitly close. All occurrences since that period have been treated as far as possible as matters of statistics, and will be found in their places in other parts of this volume.

Strong disapprobation of the Constitution of the Colony was displayed long before the discovery of gold; but the actual cause of the dissatisfaction became very manifest during the years immediately preceding 1855. The government of the Colony as a Crown dependency had long been felt to be a galling one, and the increase of population, caused by the break-out of the gold-diggings, furnished the opportunity for successful agitation. A handful of people might have been governed under the old system, but not such a community as New South Wales had become in 1854.

Victoria erected into a separate Colony.

In 1851 an Act was passed by the Imperial Parliament (13 and 14 Vict., No. 59) in accordance with which the dependency of Victoria was erected into a separate Colony, and a Constitution was to be conferred upon New South Wales. Accordingly, in 1852, a Select Committee of the Legislative Council was appointed to prepare a Constitution for the Colony in pursuance of the powers conferred by the Act above cited. The first result of the labours of the Committee was that a remonstrance was sent to the Secretary of State for the Colonies, directed not so much against the old of government, as against the amendment of the Constitu which it was proposed to introduce. Subsequently, after correspondence, and the receipt of a despatch from the Secr for the Colonies, Sir John Pakington, practically conceding all the colonists demanded, a Committee of the Legislative Co was appointed to draft the new Constitution. It consisted o following gentlemen:—Messrs. Wentworth, Deas-Thomson, J Macarthur, Cowper, Martin, Macleay, Thurlow, Murray, an Douglas.

Framing of the Constitution Act.

The Committee, in their report, stated that they desired to a form of government in perfect accordance with the British stitution, and that a conservative element ought to be const present in the Constitution; and for this reason they declared did not feel inclined to hazard the experiment of an Upper H based on the general elective franchise. To provide for this U House, the Committee gravely made the following recomm tions. They proposed that an hereditary nobility should be cre leaving the Crown to decide whether or not to give the first h of a title a seat for life, and that the aristocracy, to be established, should, in the future, elect a certain number of order to form the higher branch of the Legislature. The que of federation was also noticed in the report:—"One of the prominent legislative measures required by the Colony, and colonies of the Australian group generally, is the establishme once of a General Assembly, to make laws in relation to t intercolonial questions that have arisen, or may hereafter a among them. The questions which would claim the exerci such a jurisdiction appear to be (1) Intercolonial tariffs and coasting trade; (2) Railways, roads, canals, and other such w running through any two of the colonies; (3) Beacons and l houses on the coast; (4) Intercolonial gold regulations; (5) age between the said colonies; (6) A general court of a from the courts of such colonies; (7) A power to legislate o other subjects which may be submitted to them by addresses from the Legislative Councils and Assemblies of the colonies, and to appropriate to any of the above mentioned objects the necessary sums of money, to be raised by a percentage on the revenues of all the colonies interested."

Hereditary nobility proposed.

This report, when it was made public, caused a good deal of commotion in the metropolis, and at a public meeting held at the Royal Hotel, the following energetic protest against part of the scheme was adopted :—"That this meeting views with surprise, and strong feelings of opposition, the scheme proposed for the political constitution of the Colony, especially in respect to the establishment of an Upper House of Crown nominees, and a certain unprecedented order of colonial nobility ;" and a further resolution decided that "a larger meeting should be held, in order to record a protest against a measure so repugnant to the feelings of British subjects, and fraught with so much danger to the political rights of the people." A more numerous meeting was accordingly held, the principal speakers at which were Mr. (now Sir Henry) Parkes, Messrs. Robert Johnson, Montefiore, Deniehy, Mort, Piddington, Flood, and Archdeacon McEncroe.

The new Constitution adopted.

In spite of these meetings the Council proceeded to debate the Report as it stood. After a great deal of opposition, in order to retain the "aristocratic" clause, and after the holding of more public meetings, the "Constitution Act," the basis of the rights we now enjoy, was finally passed on the 21st December, 1853. This Act established two Legislative Chambers. The first was to consist of not less than twenty-one natural-born or naturalized subjects, four-fifths of whom were to be persons not holding any office of profit under the Crown, who were to be nominated by the Governor in the name of the Queen. The first members were to hold their seats for five years, at the expiration of which period all appointments were to be made for life. The President was to be appointed by the Crown. The Legislative Assembly was to consist of fifty-four members, the qualification for the franchise being fixed as follows:—All inhabitants of full age, being native-born or naturalized subjects of the British Crown, and not having been convicted of any crime—or, if convicted, pardoned—and having paid all rates and taxes for which they were liable, were placed in the condition precedent required for either voting or being elected to the Assembly, but they were required, in addition, to be qualified in the following respects:—As the owner of a freehold estate of £100; as householders, lodging occupiers, or leaseholders for three years at £10 per annum. To these were added boarders at £40 per annum, persons receiving £100 a year salary, and pasture-license holders for one year. Ministers of religion were declared incapable of being elected to the Legislature. Subsequent alterations to the Constitution Act have made the principle of universal manhood suffrage the basis of the electoral system of the Colony, though non-resident property holders are still entitled to the franchise under certain restrictions. A full account of the parliamentary system will be found under the chapter of this work treating of the constitution of the Colony.

Inauguration of Responsible Government.

Before the constitution could become operative it was necessary that the sanction of the British Parliament should be obtained, and for this purpose Wentworth, whose name has become identified with the establishment of responsible government, and E. Deas-Thomson, were authorized by the Council to proceed to England in order to do what lay in their power to facilitate the passage of the necessary measure. Accordingly, about the middle of the year 1855 an Act was passed by the Imperial Parliament empowering the Queen to assent to the Bill drawn up by the Council, and on the 19th December, the new Constitution was formally inaugurated by the new Governor-General, Sir William Denison, who had just succeeded Fitzroy, being sworn in afresh under a Commission from the Queen, which revoked his former credentials and appointed him "Governor-in-Chief" of New South Wales. The writs for the first parliament were issued on the 22nd May of the following year.

Successi
Governo

The succession of Governors from the foundation of the Colony to the present time is given in the following table :—

Names.	From	To
Captain A. Phillip, R.N.	26 Jan., 1788	10 Dec., 1792.
Captain F. Grose (Lieutenant-Governor)	11 Dec., 1792	12 Dec., 1794.
Captain Paterson, New South Wales Corps (Lieutenant-Governor).	13 Dec., 1794	1 Sept., 1795.
Captain Hunter, R.N.	7 Sept., 1795	27 Sept., 1800.
Captain P. G. King, R.N.	28 Sept., 1800	12 Aug., 1806.
Captain W. Bligh, R.N.	13 Aug., 1806	26 Jan., 1808.
During Governor Bligh's suspension the Government was successively administered by—		
Lieutenant-Colonel G. Johnston Lieutenant-Colonel Foveaux Colonel William Paterson All of the New South Wales Corps, afterwards 102nd Regiment.	26 Jan., 1808	28 Dec., 1809.
Major-General L. Macquarie	1 Jan., 1810	1 Dec., 1821.
Major-General Sir T. Brisbane, K.C.B.	1 Dec., 1821	1 Dec., 1825.
Colonel Stewart, 3rd Regiment (Acting Governor).	6 Dec., 1825	18 Dec., 1825.
Lieutenant-General R. Darling	19 Dec., 1825	21 Oct., 1831.
Colonel Lindsay, C.B. (Acting-Governor)	22 Oct., 1831	2 Dec., 1831.
Major-General Sir Richard Bourke, K.C.B.	3 Dec., 1831	5 Dec., 1837.
Lieutenant-Colonel K. Snodgrass (Acting Governor).	6 Dec., 1837	23 Feb., 1838.
Sir George Gipps	24 Feb., 1838	11 July, 1846.
Sir Maurice O'Connell (Acting Governor)	12 July, 1846	2 Aug., 1846.
Sir Charles A. Fitzroy	3 Aug., 1846	17 Jan., 1855.
Sir William Thomas Denison, K.C.B.	20 Jan., 1855	22 Jan., 1861.
Lieutenant-Colonel John F. Kempt (Administrator).	23 Jan., 1861	21 Mar., 1861.
The Right Honorable Sir John Young, K.C.B., G.C.M.G. — Administrator	22 Mar., 1861	15 May, 1861.
The Right Honorable Sir John Young, K.C.B., G.C.M.G. — Governor-in-Chief	16 May, 1861	24 Dec., 1867.
Sir Trevor Chute, K.C.B. (Administrator)	25 Dec., 1867	7 Jan., 1868.
Right Honorable the Earl of Belmore, P.C.	8 Jan., 1868	22 Feb., 1872.
Sir Alfred Stephen, Knt., C.B. (Administrator).	23 Feb., 1872	2 June, 1872.
Sir Hercules George Robert Robinson, G.C.M.G., Governor-in-Chief.	3 June, 1872	19 Mar., 1879.
Sir Alfred Stephen, K.C.M.G., C.B. (Lieutenant-Governor).	20 Mar., 1879	3 Aug., 1879.
The Right Honorable Lord Augustus William Frederick Spencer Loftus, P.C., G.C.B.	4 Aug., 1879	9 Nov., 1885.
Sir Alfred Stephen, G.C.M.G., C.B. (Lieutenant-Governor).	10 Nov., 1885	11 Dec., 1885.
The Right Honorable Charles Robert, Baron Carrington, P.C., G.C.M.G.	12 Dec., 1885	(still in office.)

PART II.

Limits and Area.

THE Colony of New South Wales lies almost entirely between the 29th and 36th parallels of south latitude, and between the 141st and 153rd meridians east of Greenwich. It is bounded on the east by the Pacific Ocean, to which it presents a coast-line extending over 700 miles, from Point Danger at its north-eastern extremity to Cape Howe at the south-east. From the point last mentioned, which is also the north-east limit of the Colony of Victoria, it is bounded by an imaginary line, running in a north-westerly direction to the source of the Indi, a stream rising at the foot of Forest Hill, a few miles south of the Pilot Mountain, one of the most conspicuous peaks of the Australian Alps. The southern boundary of the Colony follows the course of the Indi, and afterwards of the Murray, into which the first-named stream ultimately merges, as far as the 141st meridian of east longitude. The intersection of the Murray with this meridian forms a common point of the three Colonies of New South Wales, Victoria, and South Australia.

Boundaries of the Colony.

On the west, the Colony is separated from South Australia by the line of the 141st meridian, as far as its intersection with the 29th parallel of south latitude, at which point New South Wales, South Australia, and Queensland touch. Commencing at this point, the northern boundary of the Colony follows the 29th degree of latitude, till it is crossed by the Macintyre River, one of the upper branches of the Darling, not far from the 149th meridian. Thence it follows the course of the Macintyre upward, to the junction of its tributary, the Dumaresq; leaving the Macintyre it follows the tributary stream till it meets a spur extending from the main Dividing Range to the junction of Tenterfield Creek and the Dumaresq. The boundary runs along this spur until it joins the main range, thence, almost parallel to the coast, it follows the Dividing Range to Wilson's Peak, where the Macpherson Range branches eastward. Following the last-named range, the northern boundary reaches the coast at Point Danger.

Area.

The area comprised within these limits is estimated at 310,700 square miles, or 198,848,000 acres, being a little over two-and-a-half times that of Great Britain and Ireland. Excluding the surface covered by rivers and lakes, the area would be 195,882,150 acres or about 306,066 square miles.

Length and breadth.

The length of the Colony, from Point Danger on the north to Cape Howe on the south, is 680 miles. From east to west, along the 29th parallel, the breadth is 760 miles, while diagonally from the south-west corner, where the Murray passes into South Australia, to Point Danger, the length reaches 850 miles.

PART III.

Physical Configuration.

THE surface of New South Wales is divided naturally into three distinct zones, each widely differing in general character and physical aspect, and clearly defined by the Main Dividing Range, which traverses the country from north to south. The table-land, which forms the summit of this range, comprises one of the zones above mentioned, and marks the division between the coastal region, forming the eastern watershed, and the great plain district of the interior.

MOUNTAINS, TABLE-LAND, ETC.

Dividing Range. The Main Dividing Range runs almost parallel to the coast, at no great distance from it. On the eastern edge of the table-land the mountains rise abruptly to a height which averages between 2,000 and 3,000 feet, while on the western side they slope gradually towards the great central plain. The geographical centre of the whole mountain system of South-Eastern Australia lies in the south-western portion of New South Wales, close to the confines of Victoria. Here some of the peaks rise to a height of over 7,000 feet above the level of the sea. Mount Kosciusko and Mount Townsend, two of the highest peaks of the Australian Alps, attain an elevation of 7,171 feet and 7,256 feet respectively.

Central Plateau. The central plateau, which these heights dominate, becomes subdivided into several branches, marking the watershed of three distinct river systems. The eastern watershed extends throughout the whole length of New South Wales and Queensland, and drains into the Pacific Ocean. The western watershed, embracing a portion of the three eastern colonies, is drained by the river system of the Murray and Darling into the Southern Ocean. In the southern watershed the Snowy River has its source, its upper basin being entirely in New South Wales, although its waters flow through Victoria and enter the sea near Bass' Straits.

The south-eastern portion of the Colony.

The south-eastern portion of the Colony has the appearance of having been convulsed by some great physical disturbance. The mountains are rugged, and their slopes abrupt, as is also the case in other portions of the Dividing Range, particularly in the Blue Mountains and the eastern parts of New England; but the width and altitude of the table-land are greatest in this portion of the Colony. The average height of the Snowy and Muniong Ranges, which belong to this district, reaches 5,000 feet; and the width of the plateau, in the direction of east and west, may be set down as 100 miles. The altitude of the Monaro district averages 2,000 feet above the sea level; but as the table-land runs northward it decreases greatly in height and in width, until it narrows to only a few miles, with an elevation of scarcely 1,500 feet.

Blue Mountains.

The table-land rises again at the Blue Mountains, where the principal summits attain a considerable elevation, Mount Beemarang reaching 4,100 feet. The general level of the plateau itself will be best understood when it is remembered that the great western railway of the colony traverses a district in these mountains, of which the Clarence siding, Mount Victoria, Mount Wilson, and Blackheath are stations, situated at an elevation of over 3,000 feet. The dividing chain again decreases gradually in its spread northward of the Blue Mountains, until, as a comparatively narrow chain, it divides the waters of the Goulburn and the Hunter, on the eastern slope, from those of the Namoi and the Castlereagh, on the western. The mass once more widens out in the Liverpool Ranges, where Mount Oxley stands conspicuous, at a height of 4,500 feet, whilst, still further north Ben Lomond, reaches 5,000 feet, and the table-land maintains an average altitude of 3,000 feet, giving to this district, although situated at no great distance from the tropics, the climate and aspect of much higher latitudes.

Mountain scenery.

Narrow valleys and deep gorges everywhere break the continuity of the Dividing Range. Such is especially the case in the Blue Mountains, where the scenery is of striking and characteristic grandeur. The table-land everywhere presents one strange peculiarity. The level land suddenly terminates, and many hundred feet below stretch, as far as the eye can reach, wooded valleys, whose undulating floors are walled in by sandstone cliffs, of height so enormous as to be without parallel elsewhere in the world. At the bottom of these valleys small rivulets and tiny streams, fed by waterfalls from the table-land, trace their way, under an ever verdant dome of graceful tree-ferns and giant eucalypti.

The mountain scenery of this part of New South Wales produces on the traveller an entirely new impression. There are no snow-capped peaks upon which the rising and setting sun produces strange and magnificent colour effects; nor does any peculiar shape of the summits strike the imagination, as in the Alps and Pyrenees of the Old World. On the contrary, from the plains the New South Wales mountains look rather insignificant. But gazing from the edges of the high table-land into the deep valleys below, the mind is awed by the realization of the magnificent scale on which Nature has worked in these solitudes. In many places the cliffs rise 2,000 feet perpendicularly from the valley beneath, and the hills at their feet, formed by the accumulation of débris from their sides and from the plateau above, appear as slight undulations. The valleys and sides of the gorges, wherever there is soil, are clothed with dense vegetation, and over all is the mantle of blue haze, which makes the whole effect most striking, and has given to the range visible from Sydney its appropriate name.

Coast Ranges.

The main range throws off many spurs towards the sea on the stern slope. These divide the waters of the numerous rivers hich flow into the Pacific Ocean. Almost everywhere between e coast range and the sea the country is hilly and serrated, more rticularly in the southern portion of the Colony. In the Illa- rra district, 50 miles to the south of Sydney, the mountains irt the very edge of the coast, presenting towards the ocean a rpendicular face of cliffs nearly 1,000 feet in height. Further rth there are wider valleys, and greater stretches of country ailable for tillage and pasture.

The western slope is entirely different. Numerous ramifications the general mountain system are thrown off, but all slope gently wards the great central plain of the interior. So gentle, indeed, the declivity, that the dividing lines of the various watersheds s they extend westward, are scarcely visible, being only indicated y a succession of low ridges and isolated elevations.

Western Mountain system.

In the extreme west of the Colony, verging on South Australia, another mountain system exists, forming the western edge of an immense depression, through which the largest rivers of the Australian continent hold their devious course. The Great Barrier and the Grey Ranges are part of this system. They consist of low hills, hardly rising to the dignity of mountains, culminating in a few solitary peaks, such as Mount Arrowsmith and Mount Lyell, which attain an elevation of only 2,000 feet above sea level.

Traces have been found of the existence at some earlier period of a range of primary rocks, extending from Orange to Cobar and Wilcannia, forming the watershed between the Lachlan and part f the basin of the Darling. The range no longer exists as a land- ark, for, owing to denudation, it has almost entirely disappeared.

Mountains below limit of perpetual snow.

The whole mountain system of New South Wales lies below e limit of perpetual snow. On the south-eastern slopes of the nowy Ranges, however, and on the summits of the high peaks of e Australian Alps, snow sometimes lingers throughout the year.

LAKES OF THE MOUNTAIN REGION.

On the summit of the Main Dividing Range, and within a few miles of the inland towns of Goulburn, Queanbeyan, and Braidwood, two of the principal lakes of the Colony are situated. Lake George is 16 miles in length and 6 miles in width, draining a basin whose area is about 490 square miles. The lake is situated at an elevation of 2,200 feet above the sea, and the scenery around it is very beautiful. This lake exhibits the phenomenon of a large drainage area without a visible outlet; for though it receives many small water-courses no stream leaves it. Lake Bathurst, a few miles eastward of Lake George, is another depression on the summit of the Dividing Range, and covers in ordinary seasons an area of about 15 square miles. It is similar in character to Lake George, having no outlet to the sea. Both lakes, in periods of great drought, shrink considerably in area; but Lake George in most seasons is a fine sheet of water, and now that the railway to Cooma skirts its shores, the attractiveness of its scenery already makes it a favourite resort of tourists.

Lake George.

Lake Bathurst.

THE COASTAL REGION.

Rivers of New South Wales.

Rivers.—The main range already described, traversing the country from north to south, gives rise to numerous rivers flowing into the South Pacific. Compared with the western rivers those of the eastern slope appear insignificant enough. But compared with the principal rivers either of England or France, their relative size and importance are at once manifest.

The Tweed and Brunswick.

In the extreme north of the Colony, the Tweed and Brunswick Rivers flow through a rich country, of semi-tropical aspect. Their courses are short, and bar entrances render them navigable only for small craft.

The Richmond.

A few miles south of the Brunswick, the Richmond descends from the heights of the Macpherson Range, on the slope of Mount Lindsay, one of the highest peaks of the northern table-land. The river has three branches, and is navigable on the main arm as far as Casino, 62 miles, and on Wilson's Creek to Lismore, 60 miles from the sea. The Richmond drains an area of about 2,400 square miles of country, rugged in its upper basin, and heavily timbered, and in its lower course, flowing through rich alluvial land, where the produce of semi-tropical climes grows luxuriantly.

The Clarence.

Immediately south of the last-named stream is the Clarence—the largest river on the eastern watershed. It takes its rise in a spur of the Main Dividing Range, and runs in a south-easterly direction for 240 miles, carrying a considerable body of water through one of the richest districts of the Colony, and emptying itself into the Pacific at Shoal Bay. The upper part of its basin is very rugged, so much so that its principal tributaries, the Mitchell, Nymboi, Tembarra, and Orara Rivers, rising in the New England table-land, between Armidale and Tenterfield, all flow in an opposite direction to the course of the main stream, generally trending to the north-east, and even, in the case of the Orara, to the north-west. The Lower Clarence is a magnificent stream, averaging half a mile in width from its mouth upwards, for nearly 50 miles, and is navigable for 67 miles, as far as Copmanhurst. Ocean-going steamers of large tonnage ascend the river as far as Grafton, 42 miles from the sea. The area of country drained by the Clarence is over 8,000 square miles, or nearly half as large again as the basin of the Thames, whose course is about as long as the Clarence, but navigable for only 60 miles.

The Bellinger.
The Nambuccra

Two short rivers, the Bellinger and the Nambuccra, both navigable for some distance by small craft, enter the Pacific between the Clarence and Trial Bay.

The Macleay.

Into Trial Bay, the Macleay, one of the principal rivers of the coast, discharges after a course of 200 miles from its source near Ben Lomond. With its principal feeders, the Gyra and the Apsley, the Macleay drains an area of 4,800 square miles of country, the upper part of which, especially that portion through which the Apsley flows, is extremely rugged and precipitous. Series of waterfalls, some of which have a perpendicular descent of over 200 feet, mark the course of this stream as it runs through narrow gorges, whose sides rise in places to a height of about 2,000 feet. In its lower course the valley widens very considerably into magnificent alluvial plains, fast becoming the home of a numerous and thriving population. The Macleay is navigable for more than 30 miles, as far as the town of Greenhills, a few miles above Kempsey. The country through which it flows is for the most part thickly timbered.

The Hastings

The Hastings is the next stream met with, emptying itself into the sea at Port Macquarie. The country which it drains is rich, undulating, and densely wooded, and the area within its watershed is 1,400 square miles. Its chief arm is formed by the Wilson and Maria Rivers, on the left bank, the latter joining the main stream at Port Macquarie.

The Manning.

The Manning rises in the Main Dividing Range, and flows almost due east through a prosperous district, rapidly becoming settled. The valley through which it flows is densely wooded, and the agricultural land on both sides of the river is unsurpassed for fertility. The Manning has a length of 100 miles, and, like most of the rivers of the seaboard, its course lies through undulating country, broken in the upper portion, but widening out as it nears the sea. Its chief tributary is the Barrington, on the right bank; on the left it receives the Barnard River, the Dawson, the Lansdowne, and other small streams. The river is navigable for ocean-going vessels as far as Wingham, about 20 miles from its mouth.

Before reaching the Hunter, several small streams are met with, amongst which may be mentioned the Wollomba and Maclean, falling into Wallis Lake, the Myall, which empties into Myall Lake, and the Karuah, which reaches the ocean at Port Stephens.

The Hunter.

The Hunter is one of the chief rivers of the Colony, and has its source in the Liverpool Range. It flows first in a southerly direction until its confluence with the Goulburn, thence it takes an easterly course, and reaches the sea at Port Hunter, on the shores of which is situated the City of Newcastle. The Hunter receives numerous tributaries. The chief of these, in addition to the Goulburn, already mentioned, are the Wollombi, the Paterson, and the Williams. With its tributaries, the Hunter drains a country extending over 11,000 square miles, an area more than twice as large as the basin of the Thames. The river is navigable for ocean-going vessels as far as Morpeth, 34 miles from the sea, whilst the Paterson and the Williams are both navigable, the one for a distance of 18 miles, and the other for 20 miles. The upper courses of the main river and its branches are through hilly, if not mountainous, districts, but its lower course is mainly through rich, sandy, alluvial flats. Through its lower course the river drains the largest and most important coal-field of Australia, whose emporium is Newcastle, the second city of the Colony in shipping and commerce. The length of the Hunter is over 200 miles.

The Hawkesbury.

Though less important from a commercial point of view than the Hunter, the Hawkesbury, which reaches the sea at Broken Bay, is none the less one of the finest rivers of the eastern seaboard. It is formed by the united waters of many streams, each of considerable local importance. Its chief tributaries come from the table-land or gorges of the Blue Mountains, but the principal branch of the river itself rises in the main range, further south. The range forming the watershed between the Hawkesbury and the streams flowing eastward leaves the main range near Lake Bathurst, runs north-easterly, and terminates at the sea near Coalcliff.

Wollondilly.

Under the name of the Wollondilly, the Hawkesbury has its source not many miles from Goulburn. Flowing past that town it proceeds in a northerly direction until it receives the waters of the Cox River, which come from the Blue Mountains, after passing through wild gorges, wherein may be found some of the most magnificent scenery in Australia. From the junction of the Cox

River the stream is known as the Warragamba, which name it retains until its junction with the Nepean. This river rises in the coast range overlooking Wollongong, and together with its tributary streams, the Cataract and Cordeaux, forms the source of the water-works from which Sydney now draws its supply. Though smaller than the Warragamba, the Nepean gives its name to the united waters of the two streams. After receiving the Nepean the river flows along the foot of the Blue Mountains, through a rich valley highly cultivated. From the Blue Mountains two streams add their waters to it, the Grose and the Colo, and from the junction of the last named the river is called the Hawkesbury. From the Colo junction the river still runs northward until it is joined by the Macdonald, an important stream, navigable for some distance above its confluence with the Hawkesbury. The Macdonald comes from the north, and joins the river on the left bank. The Hawkesbury, after turning to the east, holds its course through broken country, the scenery of which has been pronounced equal to any other river scenery in the world, and finally reaches the sea at Broken Bay. The course of the Hawkesbury extends over 330 miles, and the drainage area may be set down as 8,000 square miles. Navigation is possible as far as Windsor, 70 miles from the mouth, and a little dredging would enable sea-going vessels to reach this town.

The Hawkesbury.

In the neighbourhood of Sydney some small streams fall into Botany Bay. Two of these, the Woronora and George's Rivers, have their sources on the eastern slope of the ranges, in which the Nepean, Cordeaux, and Cataract rise, and after rapid courses unite their waters before falling into the bay.

Rivers south of Sydney.

Generally speaking, the rivers south of Sydney are of less importance than those to the north, as the width of the coastal strip narrows considerably. The Shoalhaven, nevertheless, merits more than passing notice. It rises in the coastal range and follows the direction of the coast, flowing northerly through deep gullies, marked by magnificent scenery peculiarly Australian. Turning sharply to the east, it enters the alluvial plains, which are counted amongst the richest and most productive in the country. The Shoalhaven is 260 miles in length, but is navigable only for a few miles, and drains a district 3,300 miles in area. Further south, in the narrow belt between the ranges and the sea, flow the Clyde, Moruya, Tuross, and Bega Rivers. They all pass through rich, undulating, agricultural country, and each has an average length of from 60 to 70 miles. The Towamba River, at the extreme south of the Colony, empties itself into the Pacific at Twofold Bay.

Eastern rivers.

The physical aspect of all the eastern rivers is much the same, their upper courses being amidst broken and mountainous districts, and their lower waters flowing through undulating country with rich alluvial flats along their banks, for the most part highly cultivated. Where not cultivated, the country is densely covered with timber, some of which attains a magnificent growth, yielding the finest hardwood, and, in the north, cedar and pine.

The Snowy River.

Though belonging to another river system, the upper basin of the Snowy River is situated in New South Wales. This river receives the snow-fed streams rising on the southern slopes of the Monaro Range; its principal tributaries being the Bombala and the Eucumbene. The Snowy River and its tributaries water a considerable portion of the highest table-land of the Colony, between the mountain ranges of which are found large tracts of arable land, where the produce of colder climes may be grown to perfection. After leaving New South Wales, the Snowy has a rapid and tortuous course, and finally enters the sea between Cape Howe and Bass Straits, in the Colony of Victoria. The area of watershed in New South Wales is about 2,800 square miles.

HARBOURS AND PORTS.

Natural harbours.

With a coast so extensive as that of New South Wales, it would be natural to expect many harbours and bays affording outlets for the produce of the country. Such is the case. Besides harbours of commercial importance, there are others, which afford shelter for vessels in stress of weather, and a refuge in time of danger. Fortunately, however, harbours of refuge are not often required. The coast of the Colony is singularly free from cyclones, hurricanes, and like visitations. Gales are certainly not unknown, nor are disasters infrequently recorded; but the coast is very safe, and disasters are in many cases to be attributed to causes which ordinary prudence would have avoided.

Byron Bay.

Inside Cape Byron, in the north of the Colony, the bay of the same name offers shelter to vessels trading to Queensland, in all but north-east weather. A large pier has been constructed, by which the produce of the neighbouring districts of the Brunswick and Tweed may be shipped, when an entrance to these rivers is impracticable. It is also proposed to construct a breakwater, to effectually shelter the bay in all weathers.

Shoal Bay.

At Shoal Bay, the entrance to the Clarence, the anchorage is safe and commodious, and when the works designed for improving the river entrance are completed, it promises to be one of the best ports on the coast.

Trial Bay.

Trial Bay, at the mouth of the Macleay, affords ample shelter and safe anchorage. The Government have erected a large prison on the hill overlooking the Bay, and it is proposed to utilize the prisoners' labour in constructing a breakwater, with the view of making Trial Bay not only a harbour of refuge, but a shipping port. When this design is accomplished, there is every reason to suppose that it will become one of the most frequented places on the coast, as the resources of the Macleay District are great and rapidly developing.

Port Macquarie.
Port Stephens.

Port Macquarie, at the mouth of the Hastings, and the harbour at Forster, near Cape Hawke, afford good anchorage. Port Stephens, a little further south, offers at all times the most safe and commodious harbour desirable. As a natural port it is hardly inferior to Port Jackson, and the scenery of its shores is very beautiful. At present, Port Stephens is little used, owing to its proximity to Newcastle, and the sparseness of the population in its immediate district.

Port Hunter.

Twenty miles further south is Port Hunter, at the mouth of the river of that name. When first used, the harbour was inconvenient and somewhat dangerous; but this has been altered entirely by the breakwaters and training walls which have been constructed. Newcastle harbour is now safe and roomy, with shipping facilities equal, if not superior, to those found in any other Australian port. Magnificent wharves line its shores, provided with hydraulic and steam cranes of the most modern type. The length of wharf frontage at Newcastle is two miles, the trade is large and increasing, and the city ranks third amongst Australasian seaports. The importance of Newcastle is mainly due to the existence of immense coal deposits in its neighbourhood, which supply not only all the Australian Colonies, but the China seas, and the Pacific slopes of the United States, and the countries bordering on the Spanish main. Latterly, too, large shipments of wool have been made direct to English ports, Newcastle being the terminus of the railway tapping the northern districts of the Colony.

Lake Macquarie.

A few miles further south is Lake Macquarie, in the centre of the coal-field of the Newcastle district, and covering an area of 44 square miles. The great drawback to the lake as a shipping port has been the shallowness of its entrance; but extensive dykes and training walls are being constructed, which have already increased the draught of water in the channel, and with some further improvements Lake Macquarie will become an important shipping place.

Broken Bay

Broken Bay, 30 miles north of Port Jackson, forms the mouth of the River Hawkesbury. It has a bold entrance, and on Barranjoey, the southern headland, is erected a fine lighthouse. The bay has three branches, Brisbane Water being the northern, the Hawkesbury mouth the centre, and Pittwater the southern arm. The first-named opens out into a series of lakes, and the town of Gosford, standing at the head of one of them—the Broadwater—is the centre of an extensive shipbuilding district. The scenery at and around Broken Bay is characteristically Australian, and in natural beauty rivals even Sydney Harbour. South of Broken Bay the coast-line is a succession of high cliffs and sandy beaches.

Port Jackson.

The entrance of Port Jackson lies between perpendicular cliffs of sandstone several hundred feet high, and only 74 chains, or nearly 1 mile, apart. Sydney Harbour has been too often described to require further description here. It holds the first place amongst the harbours of the world for convenience of entrance, depth of water, and natural shipping facilities. Its natural beauties are the charm of all who visit its shores, and in the quiet waters of its numerous bays and coves the navies of the world might securely rest. The area of water surface of the harbour proper is 15 square miles, and the shore-line is 165 miles in circuit. At the South Head is erected a splendid light-house, fitted with an electric arc light, the power of which is scarcely exceeded on any coast. On the shores of Port Jackson stands Sydney, the metropolis of New South Wales and the mother city of the Australias. The city and its suburbs occupy 100 square miles, and have within their boundaries about 375,000 people.

Botany Bay.

Botany Bay, the first port entered by Captain Cook, the discoverer of this territory, lies a few miles south of Sydney. It covers an area of 24 square miles, and receives the waters of several small rivers. The bay has very little trade, by reason of its proximity to Sydney, but it is frequented by craft in search of shelter during stress of weather.

Wollongong, Kiama, and Ulladulla are small harbours which have been snatched, as it were, from the sea, and are important shipping places.

Jervis Bay.

About 80 miles to the south of Sydney the coast is broken by an important inlet called Jervis Bay. Its entrance is 2 mile wide, and on its bosom safe anchorage may be found in any part. It is surrounded by rich agricultural and mineral country, as yet, unexploited. Nature has been so bountiful to the country as a whole, that particular districts, undoubtedly rich, must remain for a while undeveloped, through want of labour and capital to open them up, and ports which would in older countries be prized for their convenience and capacity, here remain unused, save as refuges in stormy weather.

Bateman's Bay, at the entrance to the Clyde, is an inlet of some importance, and coastal steamers also load produce at the mouth of the Moruya, Tuross, and Bega Rivers.

Twofold Bay.

Twofold Bay is a magnificent sheet of water, near the southern limit of the Colony. Formerly it was the seat of a large whaling trade, now no more. It is well sheltered, and a fine jetty affords ample shipping facilities. Its trade is chiefly with the neighbouring colonies, in produce and live stock, the bay being the nearest outlet on the sea coast for the rich district of Monaro. A railway is planned to connect the port with the table-land and the metropolis, and Twofold Bay promises to become a considerable shipping place in the near future. On its shores is situated the town of Eden.

Coastal Lakes.

Besides the ports and harbours, properly so called, which have been above enumerated, there are several lakes, or arms of the sea, which will, with the development of the resources of the country, become ports of shipment. From Cape Hawke to Port Stephens a chain of lakes extends, communicating with the latter through the Myall River, and covering a large area. The most extensive are Wallis Lake, Myall Lake, and the Broadwater. The country round about is richly timbered, but its resources are still undeveloped. Between Lake Macquarie and Broken Bay is Tuggerah Lake, also an extensive sheet of water. Near Wollongong is Lake Illawarra, of considerable area, but shallow, and towards the south of the colony are Coila and Tuross Lakes, into which the Tuross River discharges.

ISLANDS.

Islands.

No islands of any note belong geographically to New South Wales. The Broughton Islands, lying a few miles northward of the Heads of Port Stephens, are the largest in extent. Solitary Island, situated near the northern part of the coast, between the Bellinger and Clarence Rivers, and Montague Island, 18 miles south-east of the Moruya River estuary, have been selected as the sites for light-houses, but are not otherwise important. Norfolk Island, having an area of 8,607 acres, and also Lord Howe Island, belong politically, but not geographically, to New South Wales. The last-named island has an area of 3,220 acres.

Norfolk Island.

WESTERN WATERSHED.

The Western Watershed.

The western watershed of the Colony is in physical features and geographical character the antithesis of the eastern. Instead of a narrow strip of country shut in by the sea and mountains, intersected by numerous short rivers with a rapid flow, the western watershed forms a vast basin through which the quiet waters of a few great rivers have their long, though uncertain, courses. The rivers of the western region of the Colony all belong to the fluvial system of the Murray, which carries to the Southern Ocean, through the colony of South Australia, the drainage of a watershed immense in extent, embracing the northern portion of Victoria, and the western and larger part of New South Wales, and reaching almost to the centre of Queensland.

The Murray.

The Murray, or Hume, the southern branch of this vast river system, rises in the Snowy Mountains, from which its three principal sources, the Hume, the Tooma, and the Indi descend. The first two of these streams rise on the northern and western slopes of Mount Kosciusko; the Indi, which is really the main river, has a longer course, rising in a gully near the Pilot Mountain, at an elevation of 5,000 feet above the sea. From the confluence of these rivers, the Murray rapidly descends towards the plains below Albury, where it is only 490 feet above sea level, and has still a course of 1,439 miles to run. From Albury downwards the river receives many tributaries on both banks, those from New South Wales being the most important. Above Albury the tributaries are for the most part mountain torrents, carrying to the main stream the melted snows of the Australian Alps. In its lower course, however, the Murray is augmented, through the Murrumbidgee and Darling, by the waters of secondary systems as important as its own.

Ana-branches.

Before being joined by the Murrumbidgee, the Murray receives, from a series of ana-branches, the drainage of a large portion of the country lying between the two main streams. The Billabung Creek runs almost through the centre of the plain spreading between the Murray and Murrumbidgee; in the middle of its course it communicates with the latter river, through Colombo and Yanko Creeks, whilst on the south it feeds the Murray by the channel of the Edward River. The Edward is itself an important stream. It forms with the Wakool and Tuppal Creeks, and many other smaller and less important watercourses, a fluvial system, interlacing the whole country from Tocumwal to the Murrumbidgee junction, which has been justly named Riverina. The Edward and Wakool are together navigable for over 400 miles, as far as the important town of Deniliquin. From its furthest source at the foot of the Pilot Mountain to the town of Albury the Murray has a length of 280 miles. Thence to the Darling River junction its course is 852 miles, and from that point to the sea, below Lake Alexandrina, it is 587 miles in length. The river has thus a total course of 1,719 miles, of which 1,132 are within the colony of New South Wales. The river has been navigated as far as the Ournie gold-field, about 150 miles above Albury, and 1,590 miles from its mouth.

The Murrumbidgee.

The Murrumbidgee has its source at the foot of a hill overlooking the Coolaman Plains, at a height of nearly 5,000 feet above the sea. Its course first shapes itself southward, but near the town of Cooma it takes a sharp curve and runs in a northerly direction until it

Murrumbidgee Basin.

nears Yass. Here it curves again, trending to the west in a line parallel to the Murray, but turning south-west on receiving the Lachlan, it finally joins the main river after a course of 1,350 miles. The area drained by the Murrumbidgee is estimated at 15,400 square miles. In the upper part of its course it receives from both sides numerous rivers and creeks, the most important of which are the Umaralla, Molonglo, and Yass Rivers on its right, and the Goodradigbee, and Tumut Rivers on its left bank. All these rivers flow through mountainous country over a series of plateaux, which from the Coolaman and Coorangorambula Plains to the plains round Gundagai and Wagga successively diminish in height from 5,000 feet to 720 feet and 607 feet above the sea.

The upper valleys, both of the Murrumbidgee and the Murray, are of similar physical aspect. Both rivers are snow-fed, the Murray to a greater extent than its tributaries, owing to the higher elevation of the mountains and plateaux from which it descends. In the lower basins they are also similar in character, and the plains which they drain are amongst the most fertile in the Colony. With an intelligent system of water conservation and irrigation the lower valleys of these rivers would support a large population of agriculturists on land hitherto devoted entirely to sheep pasturing.

The Lachlan.

The chief tributary of the Murrumbidgee is the Lachlan, rising in the main Dividing Range, where also its principal feeders have their source. These are the Boorowa, Crookwell, Abercrombie, and Belubula, all rapid streams, occasionally swollen by melting snow from the table-land. After receiving the Boorowa the Lachlan flows to the Murrumbidgee, through 500 miles of plain country, without receiving any tributary of permanent character. The water-courses which carry off the surplus water from the rich plains on either side of the river, only reach it in time of flood. The total length of the river is 700 miles, and its basin has an area of 13,500 square miles. The country drained by the Lachlan is similar in most respects to that of the Murray and

Murrumbidgee, and with regular rainfall or irrigation, the light red soil and sandy loam of its lower valley would yield abundant returns to the farmer. The lines of demarcation between the Lachlan basin and that of the Murrumbidgee on the south, and the Darling on the north-west, are hardly perceptible on the ground, so flat is the country through which these great rivers flow.

The Darling.

Of all the tributaries of the Murray, the Darling drains the largest area, extending as it does over the greater portion of the western district of New South Wales, and embracing nearly all Southern Queensland. From its confluence with the Murray at Wentworth up to its junction with the Culgoa a few miles above Bourke, the Darling receives only two tributaries, the Paroo and the Warrego, both intermittent, though of vast size in times of flood. For over 1,000 miles this great river holds its solitary course, Nile-like, feeding the thirsty plains of the south with water falling many hundred miles distant on the downs of Queensland. The course of the river is tortuous in the extreme; in many places a narrow neck of land, a mile or two across, separates parts of the river 20 miles distant, if the stream were followed. The Darling presents the phenomenon, not uncommon in Australian rivers, of banks much higher than the plain behind, indeed the river bed itself, though from 30 to 40 feet beneath the bank, is in some places but little below the general level of the country. Successive floods have added to the height of the banks, and have raised the bed of the stream correspondingly.

The Upper Darling.

The Darling has no source under that name, which applies only to that part of the river as far as the Bogan junction. Above this point it takes the name of the Barwon, until its confluence with the Gwydir, then it is known as the Macintyre, and afterwards the main branch receives the name of the Dumaresq. The last-named stream has its source in the Dividing Range, on the summit of the table-land at the extreme north-east of the Colony, not far from the head of the Richmond. The Dumaresq, Macintyre, and Barwon form, however, what might be really called the Upper

Darling, and this appellation would be geographically accurate. The variety of names, by which not only the Darling, but many other Australian rivers are known, is due to the fact that they were discovered in sections, the identity of which were not established until years afterwards, and the sectional names have survived.

Tributaries of the Darling.

The Darling receives, in its upper course, many tributaries, which drain the southern portion of Queensland, but these rivers only flow for a short part of their courses in New South Wales. Chief among them are the Mooni, Narran, Bokhara, Culgoa, Warrego, and Paroo. The principal affluents of the Darling within the boundaries of New South Wales are on the left bank. The Gwydir, Namoi, Castlereagh, Macquarie, and Bogan are the most important. These streams are all of considerable length and similar in character, their upper valleys are on the table-lands, and their lower courses lie through alluvial plains and good pastoral country. The Darling is navigable, in times of freshets, as far as the township of Walgett, 1,758 miles from its confluence with the Murray, thence to the sea the distance is 587 miles, making a total length of navigable water from Walgett to the sea of 2,345 miles, and it therefore ranks high amongst the rivers of the world, as estimated by navigable length. Unfortunately, however, its upper course is open only during part of the year.

Length of navigable water.

If the fluvial system of the Murray and Darling, and their principal tributaries, be considered in the light of the facilities it affords for water carriage, its value will appear not inconsiderable. The Darling River may be made available for navigation for 1,758 miles, from Wentworth to Walgett, the Murrumbidgee and Lachlan combined have 900 miles, and the Murray, from Ournie gold-field to the point where it enters the territory of South Australia, has a length of 1,120 miles. If to this be added the navigable length of the Wakool and Edward, the total distance of river which could be navigated reaches nearly 4,200 miles, in the western district alone, a length nearly twice that of the railways of the Colony.

LAKES OF THE WESTERN DISTRICT.

Here and there along the course of the western rivers are found lakes sometimes of considerable dimensions. These lakes are in reality shallow depressions, receiving water from the overflow of the rivers in times of flood, and in return feeding them when the floods have subsided. Lake Urana is the most important in the Murray and Murrumbidgee basin, and Lakes Cowal, Cudgellico, and Waljeers, in that of the Lachlan. Along the Darling are Lakes Poopelloe and Gunyulka on the left bank and Laidley's Ponds and Lakes Pammaroo, Jandoo, and Cawndilla on the right, near Menindie. On the South Australian frontier are Lake Victoria, formed by the overflow of the Murray, and others of less importance. The area of these lakes is undefined, as they vary in size according to the rainfall, sometimes covering vast extents of country, and at others being reduced to the proportions of mere waterholes, whilst in seasons of great drought they are absolutely dry. Western Lakes.

PART IV.

Climate.

IT is accepted as an ascertained fact that the temperature of lands in the southern hemisphere is lower than that of countries situated in corresponding latitudes north of the equator; to this general law New South Wales is no exception. The researches of the Government Astronomer of the Colony conclusively confirm this, and show, from the records of temperature extending over many years, that the climate of New South Wales is one of the most temperate and uniform anywhere experienced. Just as the country is divided naturally into three distinct geographical regions, so it is separated into the same climatic divisions, each of which has its characteristic features.

Coastal Region. The coastal region extends from 28° to 37° south latitude, and if the temperature accorded with that of similar latitudes in the northern hemisphere, Casino and Grafton would resemble the country bordering on the Gulf of Suez, in the Red Sea; Delhi, in India; Ningpo, in China, and New Orleans, in the United States. Such, however, is not the case. Casino has a mean temperature of 67°, only 1° more than that of Messina, in Sicily, which lies more than 9° further from the equator. Eden, which is situated at the extreme south of the Colony, in latitude 37°, has a mean temperature of 60°, which is practically the same as that of Nice and Rome, places respectively 460 and 330 miles further removed from the equator. Not only is the climate of the coastal region more mild in regard to average temperature than the corresponding latitudes in the northern hemisphere, but the range is not as great. This is a very important factor in estimating the healthiness of a country.

As regards Sydney, situated as it is midway between the extreme points of the Colony, in latitude 33° 51′ south, the same truth is apparent. Its mean temperature is 63°, and corresponds with that of Barcelona, the great maritime city of Spain, Temperature of Sydney.

and of Toulon in France, the former being in latitude 44° 22′, and the latter 43° 7′ N. At Sydney, the mean summer temperature is slightly under 71°, and that of winter 54·5°. The range is thus 16·5° Fahrenheit. At Naples, where the mean temperature for the year is about the same as at Sydney, the summer temperature reaches a mean of 74·5°, and the mean of winter is 47·5°, with a range of 27°. Thus the summer is warmer, and the winter much colder, than at Sydney. The greatest temperature in the shade ever experienced in Sydney was 106·9°, the lowest winter was 36·8°, giving a range of 70°. At Naples the range has been as great as 81°, the winter minimum falling sometimes below the freezing point.

Climate of the Coast.

Taking the coast generally, the difference between the mean summer and mean winter temperature may be set down as averaging not more than 24°, a range so small that it will be rarely found elsewhere. The famed resorts on the Mediterranean seaboard bear no comparison with the Pacific slope of New South Wales, either for natural salubrity, or for the comparative mildness of the summer and winter, while the epidemics and pestilences which have devastated those regions of ancient civilization have never made their appearance on these shores.

Climate of table-land.

Passing from the coast to the table-land, a distinct climatic region is entered. On the high southern plateau, at an elevation of 4,640 feet, stands the town of Kiandra, having a mean summer temperature of 54·5°, and a winter temperature of 33°, corresponding with that of Dunfermline, in Scotland, in latitude 56° 5′ N., while Kiandra is in 35° 50′ S. Cooma, in the centre of the Monaro plains, at an elevation of 2,640 feet above sea-level, enjoys a summer as mild as either London or Paris, while its winters are far less severe. On the New England table-land, the climate of Armidale, and other towns, may be considered as nearly perfect as can be found. The yearly average temperature is scarcely 57° while the summer only reaches 69°, and the winter falls to 46°, a range of temperature approximating closely to the famous health resorts in the south of France.

Western Districts.

The climatic conditions of the western districts of the Colony are entirely different from those of the other two regions, and have been often cited as disagreeable. Compared with the equable temperature of the coastal district, or table-land, there may appear some justification for such reputation, but only by comparison. The climate of the great plains, in spite of the heat of part of the summer, is very healthy, and an inspection of the returns of death-rates, both of children and grown persons, given elsewhere, amply bears out this view. The town of Bourke may be cited as an example. Seated in the midst of the great plain of the interior, it illustrates peculiarly well the defects, as well as excellences, of the climate of the whole region. Bourke has exactly the same latitude as Cairo, yet its summer temperature is 5° and its mean 6·5° less than the Egyptian city. New Orleans also lies on the same parallel, but the American city is 4° hotter in summer. As regards winter temperature, Bourke leaves little to be desired. The mean winter reading of the thermometer is 52·3°, and accompanied as this is by clear skies and an absence of snow, the season is both refreshing and enjoyable. The great heat experienced on occasional days in summer, when the thermometer reads considerably over 100° in the shade, is not accompanied by that moisture in the air which at the sea-coast would make a less degree of heat almost unbearable.

Dryness of climate.

It is fortunate for the country that dryness is one of its characteristics; otherwise, instead of being the abode of health, the interior of the Colony would, with abundant rains, have become an impenetrable jungle, the lurking-place of those malarial fevers which devastate so many fair regions of the Old World and America. New South Wales may therefore be compared favourably with any part of the world; and, taking into consideration the comparatively low latitudes in which it is situated, it offers a most remarkable variety of temperate climates. From Kiandra, on the highest part of the great Dividing Range, to Bourke, on the great interior plain, the climate may be compared with that of the

Climate ad
to Europea
race.

n of Europe extending from Edinburgh to Messina, but more ally resembling that of Southern France and Italy. It may fore be regarded as peculiarly fitted for the habitation of e of European race, embracing, as it does, within its limits, imatic conditions under which the most advanced races of orld have prospered. The following tables, showing the ge meteorological conditions in certain places, fairly repre- he whole Colony :—

rature, Rainfall, and other Meteorological Conditions of certain Stations in New South Wales.

n.	South latitude.	Mean temperature.	Mean summer temperature.	Mean winter temperature.	Mean daily range of thermometer in shade.	Highest reading of thermometer in shade.	Lowest reading of thermometer in shade.	Mean annual rainfall.
				Table-land.				
								in.
......	35° 52′	45·0°	54·5°	33·1°	25·4°	96·2°	-8·0°	61·2
......	36·50	50·8	62·8	41·5	26·6	98·4	20·9	29·6
......	36·12	52·2	64·6	41·6	...	107·5	15·0	18·4
an...	35·20	53·6	67·2	41·9	16·7	109·0	20·0	23·7
ria..	33·36	54·2	65·4	42·3	20·1	105·1	21·8	34·8
......	33·18	55·2	67·7	42·3	16·9	99·5	22·2	41·1
......	34·45	55·3	68·3	44·8	25·8	109·0	18·0	26·3
a	34·32	55·3	66·9	43·6	15·9	103·7	26·8	49·1
......	30·34	56·9	69·0	45·9	24·8	100·0	11·2	35·8
......	33·24	57·2	70·8	45·0	30·3	112·5	3·0	25·0
d....	29·50	57·5	67·3	46·4	22·3	104·0	16·0	30·8
......	29·48	59·5	73·2	46·1	23·9	105·0	20·0	30·8
......	32·35	59·8	74·8	47·9	19·4	114·0	26·0	28·0
......	33·27	60·8	74·7	48·7	21·0	110·0	24·0	20·7
......	32·00	61·0	74·7	47·4	25·6	112·2	22·2	25·6
				Coastal District.				
......	37·00	60·3	67·7	51·1	13·9	106·0	36·0	45·1
ong...	34·25	62·1	70·0	53·6	14·9	101·0	36·7	38·3
......	33·51	63·0	70·7	54·5	14·0	106·9	36·8	49·0
d	32·47	62·5	73·1	51·4	21·5	112·0	24·0	34·8
uarie..	31·25	63·7	72·4	55·8	15·7	101·3	34·0	63·3
r	33·36	63·8	72·3	52·6	26·1	113·9	21·5	34·3
tle	32·55	63·9	71·9	54·7	17·9	120·0	31·3	50·0
......	29·43	68·3	75·6	56·3	27·8	118·0	21·0	38·1
				Western District.				
uin	35·32	59·9	73·2	48·5	30·6	121·0	16·0	16·4
Wagga	35·80	60·2	74·4	46·7	19·7	111·0	20·0	26·0
......	32·18	60·6	73·3	48·0	25·1	112·9	17·0	19·7
orth ...	34·80	64·4	77·8	52·1	23·3	119·0	27·2	13·5
s	30·30	65·8	80·3	52·3	20·9	120·0	30·0	18·0

Average Meteorological Conditions of Sydney for each Month from 1859 to 1888.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Mean.
Average reading of barometer at 32° Fahrenheit and mean sea-level	29·930	29·965	30·052	30·076	30·085	30·007	30·119	30·100	30·051	29·999	29·974	29·912	30·013
Mean temperature................	71·4	70·8	67·7	64·9	56·7	55·7	53·3	54·5	58·7	62·6	69·0	70·5	63·0
Average reading of maximum thermometer.	78·1	77·2	75·6	71·1	65·1	60·6	59·3	62·7	66·3	70·9	73·9	77·1	69·8
Average reading of minimum thermometer.	64·8	64·6	62·9	58·2	51·8	46·2	45·7	47·4	51·1	55·7	59·1	62·5	55·8
Mean temperature of sea water	70·0	70·0	70·3	68·1	62·8	58·2	57·0	57·7	60·9	64·8	68·2	71·0	64·9
Greatest monthly rainfall, inches..	10·49	18·56	18·70	24·49	13·17	16·30	11·95	10·17	14·05	8·65	9·88	7·80	Max. 24·49
Least monthly rainfall, inches	0·42	0·40	0·42	0·06	0·21	0·54	0·12	0·04	0·08	0·21	0·20	0·45	Min. 0·04
Average monthly rainfall, inches ..	3·51	5·45	4·57	6·32	4·97	5·33	4·20	2·94	3·00	3·02	3·13	2·52	48·96
Average number of days' rain	13	14	14	13	16	12	12	11	12	13	12	12	154
Average monthly evaporation, ins..	4,552	3·479	2·885	2·290	1·706	1·347	1·552	1·788	2·346	3·194	3·928	4·732	33·799
Average monthly ozone...........	4·5	4·6	4·9	5·1	4·7	5·6	5·2	5·0	5·4	5·4	5·1	4·7	5·0

PART V.

Geological Formation.

Classification of rocks.

THE geology of the Colony has been ably treated by various learned scientists, and this work is being continually added to by Mr. W. C. Wilkinson, the present eminent Government Geologist. To the Rev. W. B. Clarke we are indebted for the first systematic classification of the various sedimentary formations found in New South Wales. These were classified by him as follows :—

Palæozoic :	Silurian	
	Devonian	
	Carboniferous	
	Permian.	
Mesozoic :	Triassic	
	Jurassic	
	Cretaceous.	
Cainozoic :	Tertiary	Miocene
		Pliocene
	Post Tertiary	Post Pliocene
		Recent.

Palæozoic formation.

Palæozoic.—This formation extends throughout almost the whole eastern portion of the Colony, the rocks of the upper Silurian age principally occurring on the western watershed of the main Dividing Range, in the country where the Murrumbidgee, Lachlan, and Abercrombie Rivers rise. They appear on the eastern watershed, along part of the coast near Bateman's Bay, and, striking inland, are found in the basin of the Clyde, and the upper valley of the Shoalhaven.

The upper Silurian rocks extend as far north as Mudgee, where they are overlaid by the Carboniferous strata of the Hunter Valley, and by the belt of volcanic rocks extending along the Liverpool Range. They reappear further north, in the upper valley of the Macleay River, on the east slope, and in the basin of the Namoi, on the west of the Dividing Range. The Silurian rocks consist of sandstone, slate, and limestone, and exhibit evidence of metamorphism, particularly in the country around Bathurst and Hill End.

Limestone.

Limestone beds, of considerable extent, are scattered throughout this formation. These are chiefly composed of crinoids and corals which outcrop prominently in the Wellington District, near Molong and Gulgong, at Tuena, and also in the Murrumbidgee District. In the limestone formations are found magnificent caves, such as the Wellington, Wiambene, and Fish River or Jenolan Caves, the fame of which has spread even beyond the confines of Australia. Rocks of the Devonian age also exist near Rydal, where Mr. C. S. Wilkinson has measured a section of strata, showing a thickness of not less than 10,000 feet.

Carboniferous Deposits.

The carboniferous formations occupy the whole valley of the Hunter, and of its chief tributary, the Goulburn, on the east slope of the main range. They are also found on the opposite slope, in the upper valley of the Castlereagh, and along the edge of the great tertiary depression which the Upper Darling drains. They appear also on the south coast, at Bulli and Coal Cliff, extending southwards to Bateman's Bay, and embracing the basins of the small rivers between the Clyde and the Shoalhaven, as well as the lower valley of the last-named river. Cut off by the high coast range, the formation reappears at Marulan and Berrima, again in the valley of the Cox River, at Lithgow Valley, and at Capertee River, thus forming a distinct connection with the great series of the Hunter.

The lower coal measures are included in the upper carboniferous series, and contain many seams of workable coal, some of remarkable thickness. These are situated principally in the lower valley of the Hunter River, comprising amongst others the Greta, Anvil Creek, and West Maitland seams. These seams are over-topped and underlaid by conglomerate and sandstones, of great thickness, the strata of this age being estimated by Mr. Wilkinson to be 10,000 feet thick. The seams in the Newcastle coal-fields, as well as those in the Illawarra and coast districts above and below Jervis Bay, belong to the upper coal measures, in which also are included the Berrima and the Lithgow seams. They appear frequently, as in the case of the last named, at a great elevation above the sea, and owing to their almost horizontal strata are worked with great facility. The coal-bearing strata extend as far as the upper valley of the Castlereagh, thence northward, as already mentioned, along the edge of the great tertiary series, to Queensland, in which colony they reappear at a considerable elevation.

Coal seams.

Mesozoic.—To this period belong the Hawkesbury and Wianamatta series, which overlay the carboniferous formation of that part of the country through which the Hawkesbury and its principal tributaries flow. It is in this formation that the wonderful gorges of the Blue Mountains, and the beautiful harbours of Port Jackson, Port Hacking, and Broken Bay occur. The rocks are of warm yellow sandstone, and the thickness of the strata is estimated at about 1,000 feet.

Mesozoic formation.

The Wianamatta series extend round the metropolis and cover a space in the shape of an irregular triangle, the angular points of which rest at Picton on the south, Richmond on the north, and Sydney on the east. The beds are composed of fine sedimentary deposits of argillaceous shales, and are of comparatively little thickness. They appear to have been deposited in hollows worn by denudation out of the sandstone, on which they directly rest.

The Wianamatta series.

To the Mesozoic period belongs also the basin of the Clarence River, the strata of which consist of sandstone, shales, and conglomerates, intersected by occasional coal seams. The extent of the series, distinctively known as the Clarence, is considerable, stretching as it does along the coast from the Tweed to Red Head, and inland some 50 miles.

Cretaceous formations.

The Cretaceous formations occupy the north-western part of the Colony, extending from the Darling westward, towards the north-west corner. Water-bearing strata have been reached at depths varying from 300 feet to 1,100 feet, and large quantities of water have been obtained. The existence of subterranean water throughout this extensive region has been practically demonstrated, and it remains for the settlers to avail themselves of the stores with which nature has charged her reservoirs in the ages that have long since been counted out.

Artesian water.

Of late years the Department of Mines has had at work in different parts of the Colony a number of diamond and other kinds of drills, and water augers. Bores have been put down, wells sunk, and artesian supplies obtained in the cretaceous formations of the counties of Killara, Landsborough, and Barrona, and lately at other points of the north-western portion of New South Wales, particularly in the vicinity of the townships of Bourke and Tibooburra. Several valuable supplies of subterranean water have also been obtained recently in other parts of Australia, the most important discovery being the artesian well at Barcaldine, in Queensland, one of the most arid districts on the continent, which flows out of a 10-inch casing, 35 feet above ground, at the rate of 240,000 gallons per day. The effects of such discoveries upon the prosperity of the interior, which has hitherto been checked principally by the uncertainty of water supply, cannot well be estimated. The water in the case of the Barcaldine Spring was obtained at a depth of 690 feet, and, compared with the magnificent result, at the insignificant cost of £775.

Boring operations.

The boring operations conducted by the Mines Department were commenced in 1882, and 254 bores have been put down, in the great majority of instances reaching underground supplies. The water obtained was generally of excellent quality, although in some few cases it was brackish and even salt. Only eight bores reached artesian springs; one of these, sunk to a depth of only 144 feet, yields a daily supply of 60,000 gallons, whilst a second, situated about 100 miles west of Bourke, flows at the rate of 22,400 gallons per day, the depth bored being 966 feet. In view of the success of the operations of the department charged with this work, it has been decided to scientifically determine the limits of the Cretaceous formation, within which it is probable artesian water will be found; the underground exploration will, moreover, be extended as far as possible towards the western confines of the Colony, and a series of wells established throughout the trans-Darling region.

Private enterprise in artesian well-boring.

The search for water has by no means been restricted to the State; very important discoveries have been due to private enterprise. During 1888 the Federal Company, which had been previously very successful in Queensland, extended its operations to this Colony. A bore was put down by this company on the Kerribree Station, near Bourke, which, at 1,073 feet, struck excellent water, the yield being about 473,000 gallons per day. Artesian water was also found in June, 1889, at Dunlop Station at a depth of 880 feet; the daily supply from this bore amounts to 600,000 gallons. This well taps the most prolific artesian source yet discovered in Australia, exceeding in volume the flow of the great Baracaldine well of Queensland. The results indicated above, afford strong ground for belief that the waters stored in the Cretaceous beds of the west will yet work a transformation in the conditions of settlement beyond the Darling, and greatly mitigate the effects of the periodical droughts, which render precarious pastoral and agricultural operations over the whole of that region.

Cainozoic formation.

Cainozoic.—To this formation belongs the greater portion of the central and western districts of the Colony. It therefore embraces the valleys of the great western rivers, and their chief tributaries. The formation is, however, intersected by a broad belt, chiefly of Silurian rocks, extending across its centre, from the Bogan River towards the Great Barrier Range, on the further side of the Darling. Large patches of Devonian formation are also met with in the same region. Making these deductions, the tertiary formation covers more than one third of the whole Colony. The vast alluvial plains were formed during the Pliocene and Post Pliocene periods. The alluvial deposits are of variable thickness, sometimes shallow, but in the great plains, between the main rivers which intersect the country, the deposits are of very great depth.

IGNEOUS AND METAMORPHIC FORMATION.

Granite formation.

The area occupied by this formation comprises one-eighth of the Colony—the principal rocks belonging to the series consisting of varieties of granite, porphyry, diorite, and serpentine. The granite formation occurs for the most part in the northern and southern masses of the great dividing chains, but is found out-cropping throughout the Silurian deposits, which cover so large a part of the centre of the Colony. Diorite and basalt occur principally in the country between the Macleay and Manning Rivers, and on both slopes of the Liverpool Range, between the upper waters of the Namoi and Macleay, and divide the upper Silurian and Carboniferous deposits of the eastern and western watersheds. Serpentine is found scattered in different parts of the Colony, chiefly at Gundagai, Bingera, Lucknow, and Port Macquarie. The granites, porphyries, and diorite rocks have been recognised as belonging to the Palæozoic age, whilst the volcanic rocks, basalts and others, are contemporaneous with the tertiary series.

PART VI.

Mines and Minerals.

THE progress of the Colony during the first sixty years of its history, viewed in the light of later events, seems painfully slow, and somewhat uncertain. Yet the earlier colonists must have been conscious of the vast heritage destined to become the fortune of Australia, for on no other supposition can their sacrifices and exertions be understood. To the nations of the old world this was practically an unknown land, and it was not till the story of the gold discoveries was noised abroad that the importance and possible future of Australia were in any way realised.

Gold-mining.

Gold-mining was but for a brief period the leading industry of these colonies, even in the wonderful years which succeeded the memorable discovery of Hargraves. Now, amongst the minerals obtained in New South Wales, it yields in importance to coal, silver, copper, and tin; whilst compared with that of pastoral and agricultural produce the value of gold procured is inconsiderable. The discovery of gold, nevertheless, made Australia a nation, for the current of immigration which set southward on the presence of the precious metal becoming known has never ceased. Thousands of men in the prime of life, attracted to these shores by the hope of fortune easily acquired on the fields of the Turon and Bendigo, seeing patient industry everywhere rewarded, remained

Immigration due to gold discovery.

to share the general prosperity, and those who came to dig for gold readily turned their attention to their former, but less exciting, pursuits.

New South Wales less affected by gold discovery than Victoria.

The settlement of New South Wales has not been affected by the gold discovery to the same extent as Victoria, yet the number of persons engaged in actual search for the precious metal was at one time considerable. This number has gradually decreased, as the fields have been despoiled of the treasures contained in their easily worked alluvial deposits. The abandonment of a gold-field is not, however, always a loss to the country. After the excitement has died out, the digger makes room for the agriculturist, and resources of a more permanent character are developed, in parts of the Colony, which, but for the prospector, would have been unknown, and, but for the farmer, would have remained a wilderness.

Modern system of gold-mining.

Gold-mining now requires the expenditure of capital for the erection of plant and gold-saving machinery; and the miner, whose stock-in-trade of gold-digging appliances consisted solely of a pick, a shovel, and a tin dish, has had, in the great majority of instances, to seek other fields of labour, which he has found in the variety of resources with which nature has endowed this rich territory. Some have sought the cities, and others the fields, returning gradually to their earlier occupation as artizans or agriculturists. Not a few, however, remained true to their miners' instincts, and have since assisted in developing other branches of the mining industry. In the early days the miner was left entirely to his own resources; but scientists have now come to his aid, and have indicated the localities where in all likelihood his researches will be attended with success. Thus the mineral industry in New South Wales is still in a very flourishing state, and maintains in employment a fair proportion of the people of the Colony. If to the search for metallic ores be added the extraction of coal and shale, it will be found that minerals and metals contribute largely to the wealth of the country, and the employment of its people.

Number of persons engaged in mining.

The following table gives the approximate number of persons actually engaged in the principal departments of mining during each of the past seven years :—

Persons engaged mining for—	1882.	1883.	1884.	1885.	1886.	1887.	1888.
Gold	9,215	6,750	6,548	5,911	6,767	6,060	8,278
Silver and silver lead........	*	*	45	929	1,297	1,670	4,215
Copper	1,442	1,913	1,746	1,000	622	503	1,214
Tin	5,146	4,100	2,850	3,395	2,814	3,188	3,499
Coal	4,647	5,481	6,227	7,097	7,847	7,998	9,301
Shale	317	293	116	324	100	120	253
Total	20,767	18,537	17,532	18,656	19,447	19,539	26,760

* No estimate made.

The population thus actually engaged in mining during the year 1888 numbered 26,760, making with their families a population of about 120,000, depending directly upon the yield of the mines.

Quantity and value of mineral products of the Colony.

An idea of the vast amount of wealth already derived from the mines of the Colony may be gathered from the summary hereunder, showing the quantity and value of the products of the various minerals since their first discovery, as well as the quantity won in the year 1888 :—

Minerals.	During the year 1888.		To the end of the year 1888.	
	Quantity.	Value.	Quantity.	Value.
	oz.	£	oz.	£
Gold........	87,503	317,100	9,972,598	37,180,817
Silver	375,064	66,668	3,298,101	679,554
	tons.		tons.	
Coal	3,203,443	1,455,198	43,146,351	21,154,307
Shale	34,869	73,612	516,121	1,156,786
Tin (ingots)	4,562	569,182	89,640	7,673,293
„ (ore and regulus)	247	13,314	17,019	837,079
Copper (ingots)	3,786	272,110	82,919	5,327,252
„ (ore and regulus)......	108	2,924	3,867	111,010
Iron	....	....	36,229	265,465
Antimony (metal)...............	....	2,918	474	70,157
„ (ore)	....		3,412	
Bismuth	18	3,911	123	24,487
Silver lead ore	29,842	1,075,737	58,966	2,269,200
Asbestos	....	....	26	488
Sundry minerals	....	3,513	....	44,570
Total value	....	3,856,187	....	76,794,465

METALLIC MINERALS.

Gold.

Gold.—Amongst the metallic minerals found in the Colony, gold occupies a foremost place, both on account of the quantity which has been, and is now being, raised, and of the influence which its discovery has had on the settlement of the country. The date of the discovery of gold in New South Wales was for a long time the theme of much controversy, and the question as to the original discoverer, long disputed. It is now agreed, however, that the existence of gold was known to the authorities during the early days, when the Colony was a convict settlement, but for obvious State reasons the matter remained secret. The first authentic record of the discovery of gold is contained in an extract from Assistant Surveyor James McBrian's Field-book, bearing date 16th February, 1823, in which the following note appears:—"At 8 chains 50 links to river, and marked gum-tree—at this place I found numerous particles of gold in the sand and in the hills convenient to the river." The river referred to is the Fish River, at about 15 miles from Bathurst, not far from the spot to which the first gold-rush was made twenty-eight years afterwards.

First mention of gold.

In 1839, Count Strzelecki found gold in the Vale of Clwydd, and communicated the discovery to Governor Gipps, but he was requested to keep the matter secret, lest the knowledge of the existence of gold should imperil the safety and discipline of the settlement. The Rev. W. B. Clarke also found gold in 1841 in the Macquarie Valley and the Vale of Clwydd, and expressed his belief that the precious metal would be found abundantly dispersed throughout the territory.

Actual discovery of payable gold.

But it was not until the year 1851 that payable deposits were proved to exist in New South Wales, and this important discovery was due to Mr. E. Hammond Hargraves, who, on his return some time previously from California, pointed out to the Government the localities in which he had found payable deposits of alluvial gold, viz., at Lewis Ponds and Summer Hill Creek, in the districts of Bathurst and Wellington. Prospecting operations followed in the neighbourhood, with the result of which every one is now familiar. A few weeks later rich deposits were discovered at Ballarat, Mount Alexander, and other gold-fields, in Victoria; and the world witnessed a gold rush from all parts of the earth to these colonies, similar to that which some years before had taken place to California. The probable effects of the movement were not clearly seen at the time, either here or in the United Kingdom, but the result has been the creation of states, whose future is surrounded with the brightest promise.

Alluvial gold

Native gold is the only true mineral species of gold which has, so far, been found in New South Wales, and was first met with in easily worked alluvial deposits. Alluvial diggings have always attracted the greater number of miners, as the precious metal is dug out without costly appliances. But, however rich they may be, these deposits are very soon worked out, for their area is generally of limited extent. The miners engaged in testing alluvial deposits for gold form a floating population, ready at any moment to migrate from one colony to another. In the alluvial deposits gold is found associated with a variety of minerals; it also occurs in the shape of grains and nuggets, water-worn in appearance, and some of considerable size. Though New South Wales has not yielded nuggets of so extraordinary a size as the neighbouring Colony of Victoria, some very splendid specimens of that gold formation have, nevertheless, been unearthed at various times.

Remarkable nuggets and their value.

Thus, in July, 1851, a mass of gold was found on the Turon River gold-fields which weighed 106 lb., or 1,272 oz. In November, 1858, at Burrandong, near Orange, another nugget was found which, when melted at the Sydney Mint, gave 1,182 oz. 6 dwt. of pure gold, of the value of £4,389 8s. 10d. A third nugget, called the Brennan, was sold in Sydney in 1851 for £1,156. In 1880 and 1882, several nuggets which were unearthed at Temora weighed from 59 to 139 oz., and in 1887 nuggets were found by fossickers in various parts of the country, four of which, weighing respectively 357 oz., 200 oz., 47 oz., and 32 oz., were unearthed at Hargraves; and another, weighing 30 oz., at Limestone Creek. The Jubilee nugget, weighing 347 oz., was also discovered in that year at Maitland Bar, in the Mudgee District, and was worth about £1,400.

Further discoveries probable

Although the alluvial deposits discovered in the early days have been practically abandoned, and are considered as worked out, there is ample evidence that the surface of the country has been merely scratched. The search for gold has been vigorously prosecuted for more than thirty-six years; but new gold-fields and fresh deposits are nevertheless being continually discovered in localities supposed to have been thoroughly examined. The gold formation is very widely diffused throughout the Colony, as may be gathered from the fact that the gold-fields of Albert, Delegate, and Ballina are between 600 and 700 miles distant from each other; and it has been estimated that the extent of country covered by formations, in association with which gold always occurs, exceeds 70,000 square miles, whilst the precious metal has also been found in formations where its presence was never suspected. A considerable portion of this area, equal to nearly one-fourth of the whole surface of the Colony, has never been touched by the pick of the miner.

Want of appliances in early days.

It is well-known to the mining public that many mines which gave promise of handsome results were abandoned in the early days, simply because the appliances at hand were not sufficiently powerful or well directed to save the gold contained in the foreign matter with which it was found associated. At Wattle Flat, on the Turon River, and at many places on the older gold-fields, gold was found in the great deposits of iron pyrites, which have since proved to be in a very high degree payable; but these claims, when apparently exhausted, were abandoned some years ago, the miners lacking the necessary knowledge or skill to obtain from the pyrites the whole of the gold they contained. Improved methods of extraction have since been invented and a rich harvest awaits the skilled miner who shall bring to bear upon the development of this industry, modern knowledge, and appliances such as are being successfully employed in other countries.

Formation in which gold occurs.

Gold is also found in quartz-veins, occurring in older and metamorphic rocks, and even more frequently in argillaceous slates, chloritic, and talcose schists, as well as granite and porphyry. Vein gold is associated more commonly with iron pyrites, though found with copper and silver ores, and occurring also in serpentine and asbestos. But the extraction of gold from quartz-veins requires the erection of extensive machinery and gold-saving appliances, involving an outlay of capital such as the ordinary miner seldom possesses. Quartz-mining is generally carried on by companies, many of which regularly pay handsome dividends to their shareholders.

Richness of gold veins.

Some idea of the exceeding richness of many of these gold veins may be gained from a few particulars relating to the yield from various mines at Hill End, which were recorded during 1873. In January of that year 1·02 cwt. of gold was raised at Beyers and Holtermann's mine from 10 tons of quartz, and a slab of vein stuff and gold from the same mine, weighing 630 lb., and estimated to contain £2,000 worth of gold, was also exhibited. Many other similar rich blocks were also shown. The Mint returns for the gold obtained in this mine during 1873 from 415 tons of vein stuff were 16,279·63 oz., value £63,234 12s. Krohman's Company, also at Hill End, raised during the same year 436 tons 2 cwt. of stone, for which the Mint returns were 24,079 oz. 8 dwt. of gold, value £93,616 11s. 9d.

Gold in coal measures.

Gold has been found in the coal measures, and carboniferous strata. The Rev. W. B. Clarke detected it in the Hawkesbury sandstone formation, on the north side of Sydney Harbour, and he also mentions that it is distributed through the sand at the mouth of the Richmond River. Along the southern part of the coast of New South Wales gold has been found near the shore in the sand washed by the waves of the Pacific Ocean, whilst at Bermagui, and in the district extending between Moruya and Eden, important discoveries of the precious metal have also been made. It would be impossible to name every part of the colony in which gold is found, as it appears throughout the whole territory, and there is ample evidence that deposits exist which will offer to the prospector or the miner a profitable field of employment for many years to come.

Weight and value of gold exported.

The following table shows the quantity and value of the gold coined and exported yearly since 1851 :—

Year.	Weight.	Value.	Year.	Weight.	Value.
	oz.	£		oz.	£
1851	144,120·88	468,336	1871	321,468·70	1,232,011
1852	818,751·93	2,660,946	1872	424,100·23	1,634,821
1853	548,052·99	1,781,172	1873	360,849·97	1,389,705
1854	237,910·70	773,209	1874	270,710·12	1,038,844
1855	170,145·73	613,148	1875	229·385·55	881,480
1856	183,946·36	666,155	1876	155,166·37	581,689
1857	161,043·26	616,712	1877	122,619·24	463,130
1858	280,557·93	1,082,865	1878	117,977·88	423,184
1859	323,984·02	1,237,662	1879	107,640·38	399,187
1860	381,613·96	1,445,158	1880	116,750·52	434,641
1861	459,879·26	1,771,855	1881	145,532·05	550,111
1862	616,909·71	2,360,383	1882	129,233·28	491,594
1863	467,399·05	1,791,534	1883	122,256·58	452,611
1864	341,954·12	1,304,735	1884	105,933·43	390,229
1865	364,540·63	1,390,803	1885	100,667·16	366,388
1866	287,534·29	1,103,246	1886	98,446·27	355,600
1867	269,407·35	1,043,458	1887	108,101·00	386,771
1868	258,773·41	1,003,002	1888	85,295·49	308,821
1869	252,130·14	967,625			
1870	240,401·86	916,409	Total	9,931,191·80	36,779,230

Decline in gold production.

The table shows that the production of gold in New South Wales has, since the year 1872, considerably decreased. This decrease is explained by the fact that the rich alluvial deposits discovered in the early days have been exhausted, and that other resources of a more permanent nature are being developed. The latter offer steadier employment to the labouring classes, without, it is true, the chance of accumulating rapid fortunes, but with more security against loss.

Alluvial gold-mining.

The principal seats of alluvial gold-mining are the Bathurst and Mudgee districts, and the country watered by the various feeders of the Upper Lachlan, and also in the Tumut and Adelong and Braidwood districts. In 1880, the Temora gold-fields, in the Murrumbidgee district, about 30 to 40 miles from the inland town of Wagga Wagga, were discovered, and were for some years in a flourishing condition. The district is now drifting from mining into an important agricultural settlement. In the north of the Colony, in the New England district; on the coast, in the county of Gloucester; and in the extreme north-west, at Mount Poole and Mount Browne, Milparinka and Tibooburra, the gold-fields sustain a considerable population of miners. The system of hydraulic sluicing is adopted in only two or three mines in the New England district, and at Kiandra, on the southern tablelands, where extensive reservoirs have been formed, and the face of the rocks attacked in various places.

Quartz-mining.

The principal quartz-veins are situated near Bathurst, Armidale, Hill End, and in the Mudgee and Cudgegong gold-fields, the last-mentioned had, up to the end of 1888, already yielded 1,095,075 oz., or over 33½ tons of gold, valued at £4,249,720. The geological surveyor, who examined this field in 1886, reported that its resources are far from being exhausted. At Adelong, Tumut, Jindera, and near Gundagai, reefs are also profitably worked, as well as on the south coast of the Colony and in the north-western district.

Revival of quart mining in 1887 and 1888.

Much enterprise has been shown during the last two years in the search for gold; and quartz-reefs have been opened up in many parts with profitable results. Old workings, which had been abandoned years ago under a prevailing idea that they were valuable only on the surface, and which had scarcely, in any instance, been tested to a greater depth than 200 feet, have been reopened with very encouraging results. This is principally the case at Ironbarks and at Lewis Ponds, the latter district having since proved as rich in silver as in gold deposits. In the country surrounding the great copper-mines of Cobar, Nymagee, and Mount Hope, between the Bogan and the Darling Rivers, reefs have been recently discovered; the prospects thoroughly justifying the outlay of capital for the development of these mines, some of which were successfully floated in 1888 in the Melbourne market, considerable sums being spent in the erection of machinery for the treatment of the quartz, but the results will only appear in 1889 and the following years. From the extreme west of the Colony the reports of the mining wardens are equally encouraging, while in the Tumut and Adelong, and other southern mining districts, much enterprise is being exhibited in the search for the precious metal. In the New England District the gold-reefs of Hillgrove in the neighbourhood of Armidale have lately attracted considerable attention. A large population has already settled in that district, and several important discoveries have been made. It appears to have been proved that these veins greatly resemble in character the reefs found in Victoria. They are in reality true fissure veins, and the permanency of the lode and the evenness of the average yield of gold per ton, seem to be established beyond doubt.

Decline of alluvial mining

An important feature of the gold-mining industry of late years is that the number of persons employed in alluvial mining and the revenue derived from this source, have diminished considerably, whilst quartz-mining is more and more becoming a permanent industry, the returns from that source being greater in 1887 and 1888 than for some years past.

Composition, colour, and specific gravity.

The gold found in New South Wales is never absolutely pure, always containing traces of other metals, such as copper, iron, and bismuth, and often a fair percentage of silver. To the presence of the latter its light-yellow colour is due. New South Wales gold is generally lighter in colour than Victorian gold, but of a deeper yellow than that found in the fields of Southern Queensland; its specific gravity averages about 17·5.

Authority to dig.

The authority to dig for gold costs only 10s. a year, and entitles its possessor not only to take up ground for mining, but also to occupy, in a mining township, a ¼ acre, or, outside a town, 1 acre of land for a business site.

Extent of mining enterprise.

In 1888, 1,717 applications were made for auriferous land, comprising an area of 14,838 acres. The steam-engines employed in quartz-mining numbered 111, with an aggregate of 1,363 horse-power. There were also 79 crushing-machines, and 424 stamp-heads. In alluvial mining there were employed 18 steam-engines, whose aggregate equalled 219 horse-power. The value of the machinery employed in gold-mining is estimated at £350,000. During the year 1888 the number of persons more or less regularly employed, in various parts of the Colony, in gold-mining was 8,278, of whom 7,668 were Europeans and 610 Chinese. There were 4,520 persons engaged in quartz-mining, and 3,758 in the alluvial diggings.

Gold sent to Sydney Mint.

The quantity of gold, the produce of New South Wales, received at the Sydney Mint for coinage, amounted to 82,891·29 oz., of the gross value of £299,837 12s., the average price being £3 12s. per ounce.

Coinage of gold in Sydney.

The figures for 1888 show a decrease of 22,377·42 oz. when compared with those of the previous year, which will appear very unsatisfactory when taken in connection with the increase in the area taken up. It must, however, be borne in mind that the results of quartz-mining are, in few cases, immediately seen. Much patient labour and the expenditure of a large amount of capital must take place before payable gold is obtained, and of leases taken up in 1888 few have yet reached the stage when it is possible to definitely determine their ultimate value, so that the practical results of the increased energy exhibited in the search for gold are not likely to be felt for some time.

Yield of alluvium.

The average weight of gold obtained by each miner in 1888 was 10·57 oz., valued at £38 6s. 1d.; this average is extremely small, owing chiefly to the large number of miners employed in developing mines which have not reached a payable stage. Attempts have been made to ascertain as far as practicable the average yield per ton of alluvium treated, and per ton of quartz crushed, for the whole colony. The following table shows the results obtained from the treatment of certain parcels of alluvium in 1888; the yield will certainly appear unsatisfactory, but the statement embraces such a very small proportion of the total quantity treated, as to be of comparatively little value for statistical purposes, and is only given because fuller details are wanting.

District.	Quantity.	Average per ton.			Yield of Gold.		
	Tons.	oz.	dwt.	gr.	oz.	dwt.	gr.
Bathurst	70	0	6	6·85	22	0	0
Lachlan	10,439	0	3	5·63	1,682	12	1
Southern	200	0	15	21·60	159	0	0
Peel and Uralla	40	0	1	0·00	2	0	0
	10,749	0	3	11·31	1,865	12	1

Yield from quartz.

The following table shows the average yield of gold obtained from certain parcels of quartz crushed in several of the mining districts.

District.	Quantity.	Average per ton.			Yield of Gold.		
	Tons.	oz.	dwt.	gr.	oz.	dwt.	gr.
Bathurst	1,155	1	0	3·39	1,667	11	23
Tambaroora and Turon	4,749	0	5	4·84	1,235	7	1
Lachlan	9,790	0	17	18·85	8,706	11	8
Southern	1,387	0	8	0·31	555	14	11
Tumut and Adelong	1,645	0	10	11·82	863	0	9
Peel and Uralla	2,180	5	4	20·92	11,431	0	5
Hunter and Macleay	342	0	15	4·17	259	9	12
Clarence and Richmond	134	1	3	19·40	159	7	12
New England	3,633	0	7	16·31	1,395	0	0
Mudgee	1,252	0	15	10·60	966	13	0
Cobar	22	2	1	21·33	47	2	12
	26,289	1	0	18·22	27,286	17	21

Accidents in gold mines.

The number of accidents in gold-mines during the year 1888 was very small, only two persons losing their lives, two others being injured.

Total production of gold in Australasia.

From the date of the first discovery of payable gold, in 1851, to the end of the year 1888, the quantity of gold produced in the Australasian colonies represents a total weight of 83,611,139 oz., extracted in the short space of thirty-seven years, and the value of this production is estimated, on the authority of the returns of the Sydney Branch of the Royal Mint, at the enormous sum of £328,274,845. The share of each colony in the production of this wealth is given hereunder :—

Colony.	Weight.	Value.
	oz.	£
New South Wales	9,931,192	36,779,230
Victoria	55,635,959	222,543,834
Queensland	5,913,919	21,475,584
South Australia	248,213	891,612
Tasmania	532,893	2,031,520
New Zealand	11,348,963	44,553,065
	83,611,139	328,274,845

Gold has been discovered in Western Australia, and reefs and alluvial deposits have now been worked for two or three years, but the value of the precious metal extracted has not been ascertained.

Silver.

Silver.—Up to the year 1882 the quantity of silver raised in New South Wales was very small, but in that and the following years extensive discoveries of this metal, associated principally with lead and copper ore, were made in various parts of the Colony, notably at Boorook, in the New England district, and, later on, at Sunny Corner, near Bathurst, and at Silverton, on the Barrier Range, in the western district. Unfortunately smelting operations in the latter district were retarded, owing to the serious drought which prevailed during the two years following the discovery of the lodes. In 1883 and 1884, however, the principal difficulties were surmounted; smelting furnaces were erected on the most modern principle, both at Sunny Corner and at Silverton, and extensive shipments of the metal were made.

The Broken Hill silver mines.

The field of Silverton has since attained an immense value. Discoveries have been made along the Barrier Range at Broken Hill, Umberumberka, The Pinnacle, and many other points; and the fame of the Silverton mines has spread over the whole world. The richer deposits worked are those held by the now celebrated Broken Hill Proprietary Company. This mine was discovered towards the end of September, 1883, by Charles Rasp, a boundary-rider on Mount Gipps Run.

Barrier Range silver deposits.

The silver deposits extend over an area of about 2,500 square miles in the Barrier Range district, beyond the river Darling, and on the confines of the neighbouring Colony of South Australia. Numerous leases have been taken up and many ventures floated into public companies, giving rise to an amount of speculation in shares in the mining exchange of Silverton and the capital cities of the Australian colonies, recalling the old days of gold discoveries. In the Barrier Range district the lodes occur in silurian metamorphic micaceous schists, intruded by granite, porphyry, and diorite, and traversed by numerous quartz-reefs, some of which are gold-bearing. The Broken Hill lode is the largest as yet discovered. It varies in width from 10 feet to 200 feet, and may be traced for several miles, the country having been taken up all along the line of the lode, and subdivided into numerous leases, held by mining companies and syndicates.

Broken Hill Proprietary Company.

The Broken Hill Proprietary Company holds the premier position. They have erected on their lease a complete smelting plant on the latest and most approved principles, and have enlisted the services of competent managers, whose experience has been gained in the celebrated silver-mining centres of the United States. From the commencement of mining operations in 1885 to the beginning of June, 1889, the Company treated 208,657 tons of silver and silver lead ores, producing 9,352,500 oz. of silver and 37,450 tons of lead, valued in the London market at £2,055,000. The Company has paid dividends to the amount of £1,144,000, and has assigned to its shareholders properties valued at £1,744,000, so that the total value of payments made has reached £2,888,000, the principal mine still remaining in their hands. During the great silver boom which occurred in the early part of 1888, the shares of the Broken Hill Proprietary Company originally issued at £20 were quoted at £396, representing a total of £6,336,000. Now that the market has reached a more reasonable state the mines which are grouped around this huge property still represent a capital value of nearly £9,000,000.

Silverton and Thackaringa.

Besides the mines at Broken Hill, there are very valuable workings at Silverton and Thackaringa in the same district; the value of silver and ore exported during 1888 from the Barrier country, was £863,467, and the results so far obtained give promise of a more substantial return during the present year. As a natural consequence of the success of these mines, numbers of miners were attracted to the district, and the population, which in 1883 consisted of only a few station hands, had risen to an estimated total of 16,000 souls at the end of 1888. The proximity of Silverton and the Barrier district to the Colony of South Australia could not fail to attract the attention of the business people at Adelaide, who were not slow to realise the advantages which they would obtain by attracting towards their capital the traffic of a region of such immense wealth. The railway system of South Australia was immediately extended to the border, and in the Colony of New South Wales a tramway was laid down, thus connecting the town of Silverton, and the mines of Broken Hill, with the railway to Adelaide and Port Pirie, in the latter instance reducing the land carriage by some 70 to 80 miles.

Valuable silver discoveries.

The success of the Barrier Ranges Mines gave rise throughout New South Wales to a veritable silver fever, and parties of miners were soon abroad in all directions searching for the precious mineral. Their energy was in many instances rewarded by the discovery of payable lodes. Thus at Lewis Ponds, Tuena, Mount Costigan, and many other places between Goulburn and Orange, huge deposits of silver-bearing ore were discovered.

Sunny Corner.

The Sunny Corner Company, which had paid handsome dividends in 1886, and yielded £160,000 worth of silver, suffered a temporary check in 1887. In the Tumut and Monaro districts numerous argentiferous lodes were found, and great excitement was the consequence. The discovery of silver lodes, said to be of great richness, at White Rock, near Fairfield, in the New England district, followed by that of auriferous and argentiferous deposits in the neighbourhood, brought up the excitement to fever heat, and considerable sums of money were asked for these mines, which were offered to the public at prices that may, without exaggeration, be termed fabulous. The closing months of 1887, and the early part of 1888, witnessed all over Australia an extravagant silver mania, which has since considerably subsided, to the detriment of many who were induced to invest their capital in speculative properties. Numerous companies were formed, whose shares, notwithstanding the fact that work had not in many instances been carried out beyond the initiatory and prospect

Silver mania.

ing stage, became a medium of speculation which could not but end in disaster. But this affects principally undeveloped mines, and properties whose value it is difficult to ascertain. Old and fairly established mines continue to prosper, notwithstanding the depression in the share market, and the coming years will doubtless witness a very large increase in the production of silver and silver ores in New South Wales. In most cases great difficulty is experienced in reducing refractory ores, and it is found more profitable to ship the ore to the Continent of Europe in a concentrated state, which fact explains the anomaly exhibited by the figures showing the value of silver produced in 1887 and 1888, as compared with the production of 1886.

Silver exported.

The quantity and value of silver and silver lead ore exported to the end of 1888 will be seen from the following table :—

Year.	Silver.		Silver lead Ore.			Total Value.
	Quantity.	Value.	Quantity. Ore.	Quantity. Metal.	Value.	
Up to	oz.	£	Tons cwt.	Tons cwt.	£	£
1881	726,779	178,405	191 13	......	5,025	183,430
1882	38,618	9,024	11 19	......	360	9,384
1883	77,065	16,488	136 4	......	2,075	18,563
1884	93,660	19,780	9,167 11	......	241,940	261,720
1885	794,174	159,187	2,095 16	190 8	107,626	266,813
1886	1,015,433	197,544	4,802 2	......	294,485	492,029
1887	177,308	32,458	12,529 3	......	541,952	574,410
1888	375,064	66,668	29,841 12	......	1,075,737	1,142,405
Total......	3,298,101	679,554	58,776 0	190 8	2,269,200	2,948,754

Increase in production of silver.

It will be seen that the production of silver has, during the past few years, considerably increased. Sufficient time has hardly elapsed since the important discoveries of silver deposits were made to enable all the principal mines to be properly developed; and it may be confidently expected that, as new deposits are opened, and the mines first discovered are brought into full working order, the exports of this metal will rapidly increase. The number of miners engaged in silver and lead mines in 1888 was 4,215, and the average value of mineral won, per miner engaged, amounted to £271 0s. 8d.

Accidents in silver-mines.

The total number of accidents which took place in the silver-mines of New South Wales during the course of the year 1888 was only 13, eight persons losing their lives, and five others being injured. Such a small proportion of casualties when compared to the number of persons engaged in silver-mining, where the elements of danger are great, must be taken as reflecting considerable credit on the management of the mines.

Tin.

Tin.—This mineral occurs principally in the granite and basaltic country in the extreme north of the Colony, near Tenterfield and Vegetable Creek, and in other districts of New England. Tin has also been discovered in other parts of the Colony, and quite lately in the Barrier Ranges, at Poolamacca, but no other fields, besides those already mentioned, have as yet received any practical development. The deposits occur in the shape of stream and lode tin, and are worked by European and Chinese miners. Although this mineral was discovered by the Rev. W. B. Clarke as far back as the year 1853 the opening of the tin-fields of New South Wales only took place in the year 1872, and since that date, to the year 1882, the output from the mines, and the export of tin, increased in a remarkable ratio, as illustrated in the statement below.

Output of tin mines.

Year.	Ingots.		Ore.		Total Value.
	Quantity.	Value.	Quantity.	Value.	
	Tons cwt.	£	Tons cwt.	£	£
1872	47 0	6,482	849 0	41,337	47,819
1873	911 0	107,795	3,660 0	226,641	334,436
1874	4,101 0	366,189	2,118 0	118,133	484,322
1875	6,058 0	475,168	2,022 0	86,143	561,311
1876	5,449 0	379,318	1,509 0	60,320	439,638
1877	7,230 0	477,952	824 0	30,588	508,540
1878	6,085 0	362,072	1,125 0	33,750	395,822
1879	5,107 2	343,075	813 15	29,274	372,349
1880	5,476 6	440,615	682 6	30,722	471,337
1881	7,590 17	686,511	609 6	37,492	724,003
1882	8,059 0	800,571	611 0	32,890	833,461
1883	8,680 1	802,867	445 4	21,685	824,552
1884	6,315 16	506,726	349 13	14,861	521,587
1885	4,657 18	390,458	534 18	25,168	415,626
1886	4,640 18	449,303	326 18	18,350	467,653
1887	4,669 8	509,009	291 13	16,411	525,420
1888	4,562 4	569,182	247 4	13,314	582,496
Total......	89,640 10	7,673,293	17,018 17	837,079	8,510,372

Importance of tin to the Colony.

Tin has, it will be seen, contributed in a very considerable degree to the general development of the natural wealth of the Colony, and in point of value its aggregate production stands in the third place after gold and coal, while for some years past its yearly production has even been in excess of that of gold. The production of this metal is now one of the settled industries of the country, and, as the supply is practically unlimited, the quantity raised depends entirely upon the price realised.

Value of tin exported.

In 1882, when the tin-mining industry was at its greatest height and prosperity, the value of the mineral exported had increased to £833,461 from £47,819 in 1872. In 1883 the production of the former year was nearly maintained, but since that time, owing to protracted dry seasons, which in many cases prevented mining operations, combined with the comparatively low price which the metal brought, the value of the output decreased in 1885 to £415,626. Since then, however, the principal causes of the falling-off in value have been removed, and a more satisfactory price has already induced a revival. The increase in the value of tin produced in 1888 is due solely to the improvement in the price of this metal, which was so remarkable a feature of the European metal market during that year. The production has remained about the same in New South Wales since 1885, but in the year 1887 it shows an increase of £57,767 on that of 1886, whilst the value of this metal exported from the colony in 1888 shows a further increase of £57,076 over that of the previous year. For a period of some months the tin market was controlled by a French syndicate, and the price of the metal, which was quoted at £116 per ton in January, 1887, ran up to £166 at the end of the year, fluctuating between the latter price and £170, until February, 1888, when the syndicate, unable to hold any longer, collapsed, and the metal fell rapidly to nearly as low a level as it ever reached within the last twenty years. During the latter months of 1888, however, the tin market again improved, and the price obtained during that year attained an average even above that of 1887. At the prices now quoted the rich deposits of New England and the western districts should, if worked on economical principles, handsomely reward industrious proprietors. Within the seventeen years that have elapsed since the opening of the tin-fields the value of the tin exported from New South Wales amounted to £8,510,372.

Chinese and Europeans in alluvial tin-mines.

In the alluvial tin-fields of Tingha, and other parts of New England, the number of Chinese employed is very great, numbering, in 1888, in all, 2,268, whilst the Europeans, working alluvial tin-drifts, only numbered 1,231.

Accidents in tin-mines.

Only two accidents occurred in the tin-mines of New South Wales during 1888. In one case the accident was fatal.

Copper.

Copper.—The principal deposits of this mineral are found in the central part of the Colony, between the Macquarie, the Bogan, and the Darling Rivers. Deposits have also been found in the New England District, and likewise in the neighbourhood of Kiama, in the Illawarra District, and mines are worked in the Carcoar and Burrowa districts, as well as at Walcha, showing that the mineral is considerably diffused throughout the Colony. The very low price of copper within the last few years has deterred many from embarking in operations which showed every promise of success, and some of the mines which had been worked for many years were closed. Still, in spite of the low price of the metal, there is little doubt that, with the adoption of the more modern methods of smelting, which are now in almost general use in the principal centres of copper production—in Spain, France, England, the United States, and Chili—the rich mines of New South Wales could be made to show handsome results. A third difficulty, common to other branches of the mining industry, lies in the great distance of some of the chief copper-mines from the port of shipment, and the consequent large cost of land-carriage.

Price of copper.

The prospect of an improvement in the price of this metal did not appear very encouraging at the opening of the season of 1887, and the English quotations continued to exhibit a tendency to maintain the low prices ruling in 1887, and even to further decrease; but towards the middle of that year a French syndicate entered into arrangements with the principal producers of copper, and succeeded in controlling the market for this metal. The prices, in consequence, rose to a much more satisfactory level. The operations of the syndicate, however, were of only short duration, and, owing to the large accumulation of unsaleable stock, prices fell unprecedently low. In 1872 copper realized as much as £108 per ton, whilst in December, 1886, the lowest price on record was touched, and only £38 7s. 6d. could be obtained for Chili bars. During the years 1884–1886, the price of the metal fluctuated between £58 7s. 6d., the highest quotation for January, 1884, and £38 7s. 6d., the lowest for December, 1886, the average prices for each of the successive years showing the following unsatisfactory state of the market:—

	£	s.	d.
Average for 1884	54	7	6
,, 1885	44	0	0
,, 1886	40	5	0

Operations French Syndicate.

At the end of 1887, however, copper had risen to £74 per ton, and in August, 1888, it was selling at £81 5s. per ton, a price which is certainly satisfactory and much nearer the statistical value of the metal than the prices realised during the three years above quoted. The operations of the French syndicate raised the price of copper but for a comparatively short period, and when, eventually, its failure took place, it had the effect of causing the abrupt cessation of the contracts entered into with some of the principal colonial mines. The average price for copper sold in Sydney by independent companies reached £71 7s. for the year 1888, thus accounting for the enhanced estimated value of the total export of this metal during that year. The copper market in

Europe has remained much disturbed since the failure above alluded to, and it will doubtless take some time before it returns to a normal position. At the latest dates copper was quoted in London at £42 per ton.

Future of copper-mining.

With a reduction in the cost of production and of carriage the copper lodes of New South Wales, which contain ores of a very much higher percentage than those of many well-known mines worked at a profit in other parts of the world, should return satisfactory results, notwithstanding the position of affairs at the present time.

Principal copper Mines.

The more important mines are those of Cobar and Nymagee situated in the Central Division, and within 80 miles of each other. The former employs over 500 men and boys; the deepest shaft is 566 feet, and the width of the lode from 2 to 50 feet. From the date of the commencement of operations in 1876, that company treated 205,005 tons of ore, giving a return equal to 22,943 tons of refined metal, an average production of 11·2 per cent. of copper per ton of ore, and the sum of £154,000 has been paid in dividends to the shareholders. Nymagee employs a complement of 350 persons, and its ores contain an average percentage of copper equal to 11·42 per cent. Since its formation, in 1883, this mine has paid large dividends. The refined Nymagee copper is superior to that of Cobar, and commands a higher price in the market. A depth of 704 feet has been reached in sinking through the lode. The New Mount Hope and the Great Central Copper-mines are also said to be rich in payable ores, but the low price of the metal during the last few years has acted against their prospects, and the great distance at which they are situated from the railway has increased the cost of production to such an extent as to leave no margin of profit. The improvement in the market during 1888, however, gave a new impetus to the copper-mining industry even in this district.

Produce of copper.

The following table shows the quantity and value of copper, e produce of the Colony, exported during each year, from 1858 1888 :—

Year.	Ingots.		Ore and Regulus.		Total value.
	Quantity.	Value.	Quantity.	Value.	
	Tons.	£	Tons.	£	£
1858	......	....	58	1,400	1,400
1859	30	578	......	....	578
1860	......	.. ..	43	1,535	1,535
1861	......	....	144	3,390	3,390
1862	......	....	213	5,742	5,742
1863	23	1,680	114	420	2,100
1864	54	5,230	......	....	5,230
1865	247	15,820	22	545	16,365
1866	255	18,905	23	1,885	20,790
1867	393	30,189	......	5	30,194
1868	644	23,297	172	4,000	27,297
1869	1,980	74,605	104	2,070	76,675
1870	994	65,671	6	60	65,731
1871	1,350	87,579	94	1,297	88,876
1872	1,035	92,736	417	13,152	105,888
1873	2,795	237,412	51	1,690	239,102
1874	3,638	311,519	522	13,621	325,140
1875	3,520	297,334	157	4,356	301,690
1876	3,106	243,142	169	6,836	249,978
1877	4,153	307,181	360	17,045	324,226
1878	4,983	337,409	236	7,749	345,158
1879	4,107	256,437	36	915	257,352
1880	5,263	359,260	132	4,799	364,059
1881	5,361	350,087	133	4,975	355,062
1882	4,865	321,887	93	2,840	324,727
1883	8,873	574,497	84	2,704	577,201
1884	7,286	415,601	19	578	416,179
1885	5,745	264,905	1	15	264,920
1886	3,969	166,429	56	1,112	167,541
1887	4,464	195,752	300	3,350	199,102
1888	3,786	272,110	108	2,924	275,034
Totals......	82,919	5,327,252	3,867	111,010	5,438,262

Accidents in copper-mines.

The number of accidents in copper-mines in 1888 was exceedingly small, only 1 person being killed and 1 injured.

Iron.

Iron.—Iron is widely diffused throughout the Colony of New South Wales, and occurs principally in the form of magnetite, brown hematite or goethite, limonite, and bog iron. Deposits of chrome iron are also found, which offer great natural facilities for economical treatment. Magnetite is the richest of all the ores of iron, and contains a little over 72 per cent. of available metallic iron, though it is not often found reaching this very high percentage. Deposits of this kind of ore exist in a variety of localities throughout New South Wales,—but, so far, little enterprise has been exhibited to ascertain their value. The results of a number of analyses made from deposits at Brown's Creek, in the County of Bathurst, and at Wallerawang, where veins were opened out a few years ago, show that the samples of ore yielded from 40·89 to 56·85 per cent. of metallic iron. At Wallerawang a variety of garnet, containing a large percentage of metal, occurs in conjunction with the ore in the veins, which is described as "extremely well adapted for reduction in the blast furnace." Brown hematite or goethite occurs in very extensive deposits in the Blue Mountain Ranges, the principal centres, so far explored, being situated at Mittagong, Jamberoo, and Berrima, at Lithgow Valley and Wallerawang, and in the Mudgee District. The result of a number of analyses of this kind of ore denotes that it is very rich in metallic iron, containing a percentage of 42·69 to 64·48 per cent., and in the majority of cases over 55 per cent. of metal. The value of these deposits is enhanced by their almost invariable occurrence in proximity to limestone and coal beds. It is fortunate, also, that the main line of railway passes through the region where the deposits are most easily worked.

Maximum richness of magnetic ores of iron.

Analysis of magnetite from Wallerawang mines.

Brown hematite or goethite.

Limonite—a variety of brown hematite—principally occurs at Lithgow, Eskbank, and Bowenfels in the Blue Mountains, and at Bulli in the Illawarra district. This ore is usually found very rich in metal, and contains an average of over 50 per cent. of iron, while the English clay bands, which are mostly carbonates, only contain about 30 per cent. of metallic substance.

Richness of English and Colonial clay-bands.

Bog iron ore.

Bog Iron Ore, which is impure *limonite*, is principally found at Mittagong; and assays of this ore gave a percentage of metal equal to an average of over 45 per cent. *Chromium* is found in the northern portion of New South Wales, in the Gwydir and New England districts, and also at Yass, Young, and near Ironbarks and Mudgee. It is usually associated with serpentine, but so far nothing has been done to develop these valuable deposits.

Chromium.

No other colony of the group possesses deposits of iron ore approaching in extent or richness those of New South Wales; it is therefore possible that at some future time this Colony will become the great seat of the iron industry of Australia. As illustrating the present extent of the supply required, the following table has been compiled; the figures given include the values of all description of iron, machinery, or iron manufactures, except cutlery and implements to end of 1887:—

Australasian imports of iron and iron manufactures.

VALUE OF IRON AND IRON MANUFACTURES IMPORTED INTO THE VARIOUS COLONIES.

Colony.	1884.	1885.	1886.	1887.	Total for Four Years.
	£	£	£	£	£
New South Wales	1,942,907	2,233,895	1,465,401	1,221,332	6,863,535
Victoria	1,113,870	1,137,266	1,147,863	1,374,859	4,773,858
Queensland	749,910	665,926	645,285	568,403	2,629,524
South Australia ..	367,324	378,482	307,783	345,707	1,399,296
Tasmania	242,272	192,493	245,516	193,598	873,879
New Zealand......	990,160	755,970	615,116	642,225	3,003,471
Totals	5,406,443	5,364,032	4,426,964	4,346,124	19,543,563

The average yearly import for the four years covered by the above statement amounts to £1,715,884 for New South Wales, and £4,885,891 for Australasia; and the quantity of pig iron required to produce the material represented by these values was approximately 150,000 tons and 440,000 tons per annum, for New South Wales and the whole group of colonies respectively.

Iron manufactories in N. S. Wales.

The only works for the manufacture of iron from the ore are situated at Eskbank, near Lithgow, where the metal treated is red siliceous ore, averaging 22 per cent., and brown hematite, yielding 50 per cent. metallic iron. Abundance of coal and limestone are found in the neighbourhood. This establishment, however, has for some time abandoned the manufacture of pig iron, for which it was originally built. The principal work now carried on is the rerolling of old rails, the manufacture of iron bars, rods, and nails, and of ordinary castings.

Antimony.

Antimony.—Deposits of antimony occur in the Colony in various places, chiefly in the Armidale, Bathurst, and Rylstone districts. The principal centre of this industry is at Hillgrove, near Armidale, where the Eleanor Mine, the richest in the Colony, is situated. The results of a number of analyses, made by the authorities of the Geological Museum, show a per centage of metal ranging from 39·90 to 69·97 per cent. of metal; but notwithstanding these encouraging assays the price of this metal has not been sufficiently high to tempt Colonial producers. In the antimony mines at Razorback, near Bathurst, as well as at Hillgrove, gold has been found associated in payable quantities with this mineral. Up to the end of 1888 the value of antimony exported from the Colony was £70,157.

Manganese.

Manganese.—Deposits of manganese ore have been discovered during the past few years in various parts of New South Wales. Pyrolusite, in the form of black oxide and manganese dioxide, occurs principally in the county of Argyle and in the central portion of the Great Dividing Range, extending northward as far as Tamworth and Bendemeer. Some of the specimens analysed have yielded a very high percentage of metal, but the demand for manganese in the Colony is very trifling, and until a foreign market is found, or local manufactories requiring the metal spring up, the rich deposits of this ore will remain untouched. The ore is found extensively in conjunction with iron in coal and limestone country, and often contains a small percentage of cobalt.

Bismuth, Cobalt, Calamine, and Mercury also occur in many places, but, with the exception of the former metal, no deposits have yet been systematically worked.

Bismuth.

Bismuth is found associated with molybdenum and gold, in quartz-veins in the neighbourhood of Glen Innes, whence the quantity raised has been chiefly obtained. The principal mine is at Kingsgate, where this mineral occurs in a granitic formation, associated with molybdenum, mispickel, and tin. The largest mass of native bismuth yet discovered in New South Wales weighed 30 lb. The value of metal exported up to the end of 1888 was £24,487. This industry gave employment to 60 persons in 1887. Deposits of cobalt have been found lately at Port Macquarie, but the market for this metal is small, and no attempt has yet been made to produce it on any large scale. Work has, however, been commenced at the above-mentioned locality.

Mercury.

Mercury in the native state was discovered in 1841, on the Cudgegong River, and it also occurs at Ophir and at the Clifton Mine, Boorook, but the deposits have never been worked.

Cinnabar

Cinnabar has been obtained at Cudgegong, where a mine was worked for some time; it has also been discovered in the Abercrombie Ranges, and at Moruya. In all cases it was associated with gold and other minerals.

Platinum and tridomine.

Platinum and the allied metal *Tridomine* have been found in New South Wales, but so far in inconsiderable quantities, the latter occurring commonly with gold or tin in alluvial drifts.

Tellurium.

Another of the noble metals ***Tellurium*** is also said to have been discovered at Bingera; but notwithstanding the great value of these metals the discoveries just mentioned have not led to any further search.

NON-METALLIC MINERALS.

Coal.

Coal.—The carboniferous formations extend over a considerable portion of the colony, and workable coal-seams have been discovered in many places. At present, however, the coal-mining industry is confined to those centres, which, from their close proximity to ports of shipment, or to the railway lines, afford ready means for the disposal of the commodity when raised.

Discovery of coal.

A.A. Co.'s monopoly.

Coal was first discovered in the Colony in the year 1797 by a man named Clark, who was supercargo of the "Sydney Cove," and later in the same year Lieutenant Shortland discovered the River Hunter, with the coal-beds situated near its mouth. In 1826 the Australian Agricultural Company obtained a grant of 1,000,000 acres of land, together with the sole right, conferred upon them by charter, of working the coal-seams which were known to exist in the Newcastle district. Several mines were opened up, and profitably worked for a number of years; but it was not until the expiration, in 1847, of the monopoly enjoyed by the company, that the coal-mining industry showed signs of development.

Output of coal.

In the year named the yearly output of coal had only reached the total of 40,732 tons, of the value of £13,750. Six years afterwards the production had been doubled, and the output of this mineral has rapidly increased, year by year, and coal-mining has now become one of the staple industries of the Colony. Newcastle is singularly well fitted by situation to become the port of supply for all the countries of the southern seas. Every week vessels leave its wharves coal-laden, not only for the Australian colonies, but for China, India, the Pacific Slope of North and South America, Mauritius, the Cape of Good Hope, and other lands. Every provision has been made by the Government for shipping coal, and over two miles of wharves, furnished with cranes and shoots capable of loading 16,200 tons per day, line its shores. The markets of the Colonies are also supplied with quantities of excellent coal from the seams worked in the Illawarra district.

Mountain coal

The deposits found in the Blue Mountains, near the line of railway which runs along their crest, at Katoomba, Lithgow, Wallerawang, and elsewhere, supply part of the requirements of the city, and other industrial centres in its neighbourhood, as well as part of the western district of the Colony. Coal is also mined at Berrima and other places in that district, whence a large part of the coal consumed in the southern districts of the Colony is obtained. The area over which coal is distributed is very great, and has been computed at 23,950 square miles; besides this it is known to underlie the Hawkesbury sandstone in and around Sydney, having been discovered at various places by boring. Coal has also been found in the Clarence series, though it has not yet been worked commercially.

Coal area

From the 40,732 tons extracted in 1847 under the monopoly of the Australian Agricultural Company, the quantity raised under public competition and enterprise has in 1888 expanded to the large figure of 3,203,444 tons, valued at £1,455,198; and a glance at the statement following will show that the output has steadily increased. Up to the end of 1888 the total quantity of coal extracted from the New South Wales mines, from their opening in the earlier years of the century, amounted to 43,148,351 tons, valued at £21,154,308.

Total quantity obtained.

The number of coal-mines registered in New South Wales during 1888 was 71, as compared with 61 in the previous year. These gave employment to 9,301 persons, of whom 7,622 were employed underground and 1,679 above ground. The average quantity of coal extracted per miner was 420 tons, which is considerably below the average of the past ten years. In 1882

Coal raised in New South Wales.

the weight per miner stood at 578 tons; but the yield has since gradually declined, so that the average for 1888 was smaller than for any year since 1880, as the following table shows.

Amount of Coal raised in New South Wales, and number of Coal-miners employed.

Year.	Number of persons employed in and about mines.	Number of persons employed underground.	Quantity of coal raised.		
			Total.	Per person employed in and about mines.	Per person employed underground.
			Tons.	Tons.	Tons.
1879	5,034	4,203	1,583,381	314	376
1880	4,651	3,851	1,466,180	315	380
1881	4,098	3,419	1,769,597	431	517
1882	4,587	3,649	2,109,282	459	578
1883	5,481	4,407	2,521,537	460	572
1884	6,227	5,050	2,749,109	441	544
1885	7,097	5,627	2,878,864	405	511
1886	7,847	6,346	2,830,175	360	446
1887	7,998	6,539	2,922,497	365	447
1888	9,301	7,622	3,203,444	344	420
Average for 10 years.	6,232	5,071	2,403,406	390	479

Output per miner.

From the figures just given it would appear that every miner working underground extracts annually an average of 479 tons, which, calculated at the mean price of coal at the pit's mouth, is equivalent to £219 11s. This production is certainly very large, and compares favourably with the results exhibited by the principal coal-raising countries of the world, as will be evident from the following figures given by Mulhall :—

Country.	Tons of coal raised per miner.	Value at the pit's mouth per ton.			Total value of coal raised per miner.		
		£	s.	d.	£	s.	d.
New South Wales	474	0	9	2	219	11	0
Great Britain	303	0	7	0	106	1	0
United States	295	0	9	0	132	15	0
Germany	270	0	5	0	67	10	0
France	190	0	11	0	104	10	0
Belgium	168	0	7	8	64	8	0
Austria	192	0	6	0	57	12	0

Earnings of Miners.

In the absence of information as to the average amount of ges paid to coal-miners in other countries an exact comparison ot possible, but it is abundantly clear, that whatever may be drawbacks to a miner's lot in New South Wales in no other try is it so satisfactory. The foregoing table proves this, for he improbable supposition that the miner everywhere receives ages the same proportion of the value of the coal as in New h Wales, that is about 40 per cent. of the selling price at the mouth, the average earnings in each country would be :—

Country.	Coal per miner.	Wages per ton of coal.			Earnings of miner per annum.		
	tons.	£	s.	d.	£	s.	d.
South Wales	474	0	3	7	84	18	0
Britain	303	0	2	10	42	18	0
d States	295	0	3	7	52	17	0
any	270	0	2	0	27	0	0
e	190	0	4	5	42	0	0
um	168	0	3	1	25	18	0
ia	192	0	2	5	23	4	0

Coal-mining in Northern Districts.

the Northern or Hunter River District the number of ries under official inspection in 1888 was 44, employing a lement of 6,873 persons, 5,736 of whom were miners and lers. The quantity of coal raised amounted to 2,067,042 tons, 4·5 per cent. of the whole production of New South Wales, ing a decrease of 176,750 tons compared with the output of , and a decrease on the figures of the previous three years. total weight of coal won in the Colony was, however, 3,444 tons as against 2,922,497 tons in 1887, showing an ase of 9·61 per cent. In this increase, however, the northern ries did not participate, owing to the strike which occurred e last quarter of 1888, paralyzing the commerce of the dis- and seriously affecting the whole trade of the Colony. Cal- ted merely on the average annual rate of increase of the total uction of the country, it will be found that this district lost benefit arising from the hewing and handling of 392,378 tons

Effect of strike.

of coal, representing at the average price of 1888 a sum of £179,840, which constitutes the minimum of the loss sustained.

The table given below shows the growth of the coal industry within the last nine years in the Hunter District. It will be seen that the quantity of mineral raised and the number of persons employed have been steadily increasing.

Northern District Coal-mines.

Year.	Number of persons employed in and about mines.	Number of persons employed underground.	Quantity of coal raised.		
			Total.	Per person employed in and about mines.	Per person employed underground.
			tons.	tons.	tons.
1880	3.679	3,148	1,079,009	293	342
1881	3,234	2,744	1,352,472	418	492
1882	3,475	2,830	1,569,517	452	554
1883	4,184	3,436	1,899,700	454	552
1884	4,735	3,927	2,055,343	434	523
1885	5,380	4,400	2,113,373	393	480
1886	6,133	5,044	2,178,116	355	432
1887	6,287	5,217	2,243,792	356	430
1888	6,873	5,736	2,067,042	300	360

Coal-mining in Southern Districts.

In the Southern Districts there were in 1888 twelve collieries under official inspection, giving employment to 1,676 persons, of whom 1,244 were at work underground. These numbers exhibit an increase of 27·6 and 26·7 per cent. over the figures for 1887, and also show that within the last nine years the industry on the South Coast has made considerable strides. The coal won in 1888 amounted to 796,806 tons, or more than twice the quantity raised in 1887; the average output per miner was also considerably greater. This increase is certainly extraordinary, and is attributable to the Newcastle strike already referred to. Had the Southern Collieries augmented their output merely proportionately to the total increase of the Colony—that is, at 9·61 per cent.—the additional quantity raised would have been 36,196 tons instead of 420,148 tons, as was actually the case. The gain to the Southern District by reason of the strike, without taking into consideration the higher price obtained for coal, may be set down at over £160,000. It is, moreover, not improbable that the impetus received during 1888 will have a favourable effect on the progress of the Southern District. The history of coal production in this region may be gathered from the following table :—

Southern District Coal-mines.

Year.	Number of persons employed in and about mines.	Number of persons employed under-ground.	Quantity of coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
			tons.	tons.	tons.
1880	807	563	240,211	298	426
1881	654	499	253,283	387	507
1882	878	633	342,126	389	540
1883	998	736	389,419	390	529
1884	1,097	820	419,942	382	512
1885	1,348	918	453,728	336	494
1886	1,298	947	370,830	286	390
1887	1,313	982	376,658	287	383
1888	1,676	1,244	796,806	475	640

Coal-mining in Western Districts.

In the Western Districts there were in 1888 a total of 15 collieries registered, giving employment to 752 persons, of whom 642 were at work underground. From the subsequent table it will be seen, that, owing to the same causes which operated in favour of the Southern Collieries, the output was in excess of former years; the advance, was however not so marked as in the case of the Southern mines. The average quantity of coal raised per miner is much greater in the Western collieries than elsewhere in the Colony. This is due to a variety of causes, but chiefly owing to the greater thickness of the seams and the more brittle character of the coal, and to the circumstance that the coal-beds are almost horizontal and generally at small depths; in some cases the mouths of the pits are on a level with the surface of the ground. The facility for working coal is therefore much greater in these mines than those at Newcastle. But though the out-put is greater per miner than in the other coal regions,

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the price for hewing is lower, so that the earnings of the individual miner do not differ greatly wherever the mine is situated.

Coal production in the Western Districts.

The following table shows the growth of coal production in the Western region during the last nine years. The progress has been very regular and in keeping with the advance of settlement in the portion of the colony extending from the Blue Mountains to the Darling, in which the Western collieries have a monopoly of the coal trade. Situated as these mines are in close proximity to the principal iron-fields of New South Wales, their future prospects will be greatly assured should the manufacture of iron from the ore become an established industry in this part of the Colony.

Western District Coal-mines.

Year.	Number of Persons employed in and about Mines.	Number of Persons employed underground.	Quantity of Coal raised.		
			Total.	Per Person employed in and about Mines.	Per Person employed underground.
			Tons.	Tons.	Tons.
1880	165	140	146,960	890	1,049
1881	210	176	163,842	780	930
1882	234	186	197,639	844	1,062
1883	299	235	232,418	777	989
1884	395	303	273,824	693	904
1885	369	309	311,763	845	1,009
1886	416	355	281,229	676	792
1887	398	340	302,137	759	888
1888	752	642	339,594	451	529

Accidents in coal-mines.

Accidents in coal-mines were, fortunately, not as frequent in 1888 as in the two preceding years. In 1887 the loss of life was especially large, chiefly owing to the disastrous explosion in the Bulli Mine, whereby eighty-one persons lost their lives. The number of accidents, with the proportion of miners to each fatal and non-fatal case, is given below, as well as the quantity of coal raised to each life lost.

Accidents in Coal Mines.

Year.	Non-fatal Accidents.	Fatal Accidents.	Persons employed.		Coal raised.	
			Per Non-fatal Accident.	Per life lost.	Per Non-fatal Accident.	Per life lost.
					tons.	tons.
1881	33	2	124	2,049	53,624	884,798
1882	33	12	139	382	63,917	175,773
1883	34	15	161	365	74,160	168,102
1884	34	14	183	445	80,858	196,364
1885	40	11	177	645	71,971	261,714
1886	43	29	182	270	65,818	97,592
1887	45	94	178	85	64,944	31,095
1888	43	15	216	620	74,500	213,563

Bulli Explosion.

Owing to the number of lives lost at Bulli in 1887 the average for this Colony appears considerably higher than for Great Britain, although the circumstances surrounding mining in New South Wales would warrant the expectation of a much lighter average.

The following table shows the value of coal raised in the Colony from the earliest times. It will be seen that the total value to the close of 1888 was £21,154,308:—

Value of coal raised.

Coal raised in the Colony, and average price per Ton.

Year.	Quantity.	Average per ton.		Value.
	Tons.	s.	d.	£
Prior to 1829	50,000	10	0	25,000
1829	780	10	1·23	394
1830	4,000	9	0	1,800
1831	5,000	8	0	2,000
1832	7,143	7	0	2,502
1833	6,812	7	6·73	2,575
1834	8,490	8	10	3,750
1835	12,392	8	10·19	5,483
1836	12,646	9	1·06	5,747
1837	16,083	9	8·81	7,828
1838	17,220	9	9·05	8,399
1839	21,283	9	9·73	10,441
1840	30,256	10	10·86	16,498
1841	34,841	12	0	20,905
1842	39,900	12	0	23,940
1843	25,862	12	6·54	16,222
1844	23,118	10	8·34	12,363
1845	22,324	7	10·27	8,769

Coal raised in the Colony, and average price per ton—*continued.*

Year.	Quantity.	Average per ton.		Value.
	Tons.	s.	d.	£
1846	38,965	7	0·46	13,714
1847	40,732	6	9·01	13,750
1848	45,447	6	3·38	14,275
1849	48,516	6	0·45	14,647
1850	71,216	6	6·67	23,375
1851	67,610	7	6·66	25,546
1852	67,404	10	11·33	36,885
1853	96,809	16	1·51	78,059
1854	116,642	20	5·63	119,380
1855	137,076	12	11·96	89,082
1856	189,960	12	4·06	117,906
1857	210,434	14	0·97	148,158
1858	216,397	14	11·84	162,162
1859	308,213	13	3·14	204,371
1860	368,862	12	3·36	226,493
1861	342,067	12	9·52	218,820
1862	476,522	12	9·73	305,234
1863	433,889	10	10·66	236,230
1864	549,012	9	10·10	270,171
1865	585,525	9	4·43	274,303
1866	774,238	8	4·44	324,049
1867	770,012	8	10·79	342,655
1868	954,231	8	9·08	417,809
1869	919,774	7	6·32	346,146
1870	868,564	7	3·54	316,836
1871	898,784	7	0·47	316,340
1872	1,012,426	7	9·92	396,198
1873	1,192,862	11	1·94	665,747
1874	1,304,612	12	1·37	790,224
1875	1,329,729	12	3·89	819,430
1876	1,319,918	12	2·06	803,300
1877	1,444,271	11	10·74	858,998
1878	1,575,497	11	8·28	920,936
1879	1,583,381	12	0·12	950,879
1880	1,466,180	8	4·72	615,337
1881	1,769,597	6	9·55	603,248
1882	2,109,282	8	11·97	948,965
1883	2,521,457	9	6·40	1,201,942
1884	2,749,109	9	5·71	1,303,077
1885	2,878,863	9	3·72	1,340,213
1886	2,830,175	9	2·53	1,303,164
1887	2,922,497	9	2·57	1,346,440
1888	3,203,444	9	1·00	1,455,198
Total.....	43,148,351	9	9·38	21,154,308

Price of coal.

The above table shows that coal, like other articles of commerce, is subject to fluctuations in price. These fluctuations have to a large extent arisen, in the past, from uncertainty in the rkets. This uncertainty no longer exists, for the local markets those of the other Australian Colonies, demand a large share the coal raised. The proportion of the total taken by Austral- increases every year, and operates in the direction of steadying price, by removing the principal cause of fluctuation. The ghest average price obtained during any year was in 1854, the st of the Crimean war, and the third after the gold rush, when e price per ton was not less than 20s. 6d. In 1872 the output ached 1,000,000 tons, ten years later it had increased to 000,000, and in 1888 to 3,203,444 tons.

Local consumption.

The Colony was its own chief customer during 1888, when out of a total production above stated, of 3,203,444 tons, its consumption amounted to 1,279,572 tons, or nearly 40 per cent. Victoria came next, with 744,425 tons, or 39 per cent. of a total export of 1,923,872 tons. The quantity of coal required for local consumption denotes a satisfactory increase during each year, as the following statement shows:—

Year.	Tons of Coal.	Year.	Tons of Coal.
1876	451,101	1883	1,009,012
1877	528,544	1884	1,058,346
1878	569,077	1885	1,122,507
1879	585,332	1886	1,094,310
1880	712,824	1887	1,132,055
1881	739,753	1888	1,279,572
1882	847,737		

Consumption per head.

The annual consumption per head increased from 15 cwt. in 876 to 22 cwt. in 1887, and 24 cwt. in 1888. The larger use of eam for railway locomotives, for manufacturing, and other purses, as well as the multiplication of gas-works, accounts for a ge portion of the increase, but it must also be borne in mind at the use of firewood has much decreased in the neighbourhood Sydney, and that the consumption of coal and gas in the city household purposes has therefore largely increased.

Export of coal.

The quantity of coal supplied to the customers of the Colony abroad shows also a large increase during this period.

Year.	Tons.	Year.	Tons.
1876	868,817	1883	1,512,445
1877	915,727	1884	1,690,763
1878	1,006,420	1885	1,756,356
1879	998,049	1886	1,735,865
1880	753,356	1887	1,790,442
1881	1,029,844	1888	1,923,872
1882	1,261,545		

Thus, notwithstanding the baneful effects of the Newcastle strike, the increase in the export trade in coal amounted in 1888 to 133,430 tons. This represents 47·5 per cent. of the total increase in the production, and shows that local requirements absorbed the larger proportion of the increase, amounting to 147,517 tons.

Countries to which New South Wales coal is principally exported.

The chief customers of New South Wales for coal during the years 1887–8 will be found in the following table, from which it will be seen how wide is the circle which relies upon the Colony for the supply of one of the chief necessaries of civilized life.

Countries to which Coal was exported during the years 1887 and 1888.

Country or Port.	1887.		1888.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
Victoria	723,676	379,206	744,425	406,744
United States	299,802	164,983	495,300	282,059
New Zealand	150,399	81,478	140,882	74,841
Chili	53,133	28,750	119,505	67,073
South Australia	127,370	62,715	94,886	51,370
Hongkong	86,092	47,448	48,061	26,868
Tasmania	43,375	23,631	39,999	20,755
India	54,214	30,248	36,143	20,593
Java	51,974	28,739	35,653	19,766
Phillipine Islands.........	38,821	21,355	34,000	18,908
Celebes	....	....	1,367	752
Sandwich Islands.........	10,720	5,897	23,124	12,749
Singapore	32,040	17,807	21,568	12,194
Western Australia	13,837	7,429	12,296	6,485
New Caledonia	15,153	7,928	11,816	6,303
China	23,187	14,301	10,656	6,439
Peru	9,368	5,578	9,921	5,455
Fiji	21,081	12,067	8,941	4,857

Countries to which Coal was exported—*continued.*

Country or Port.	1887.		1888.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
itius	9,916	5,627	7,323	4,076
nsland	18,613	10,625	7,276	4,098
Sea Islands.........	1,701	1,053	5,786	3,343
da	....	....	4,413	2,437
co	2,310	1,169	2,193	1,206
n	1,741	1,300	1,685	927
ng	....	....	1,535	1,151
ia	....	....	1,351	743
tra	....	....	1,130	621
dor	....	....	1,039	585
r Wilhelm's Land..	909	650	603	444
na	577	317	....	....
h New Guinea......	....	....	485	340
of Good Hope	433	238	....	....
an	....	....	400	220
o	....	....	110	70
Total................	1,790,442	960,539	1,923,872	1,064,472

Wealth of Colony in coal.

e wealth of the Colony of New South Wales in coal is enor-, and the further development of the industry may be regarded nost a certainty. As the great Australian Continent is only e early period of the development of its immense resources, oal-mining industry of New South Wales may also be said to its infancy. It is, however, a very vigorous infancy, giving ise of a great future.

Coal as a heat producer.

w South Wales coal, especially that obtained in the northern s, compares favourably as a heat producer with the best n coal. It has the advantage of a greater specific gravity e extent of 5·4 per cent., and it contains less sulphur. The ar comparison given below gives a clear view of the properties e principal Australian coals, as contrasted with the mean of h coals. The average of English, Welsh, and Scotch mines be found after the analysis of Northern District coals, and it be seen that there is practically little difference between the sh and Hunter River coal.

Analysis of Northern District Coals, New South Wales.

Locality.	Specific Gravity.	Composition per cent. exclusive of water only.						Water per cent.	Coke per cent.	Water at 212° converted into steam by 1 lb. coal.
		Carbon.	Hydrogen.	Oxygen.	Nitrogen.	Sulphur.	Ash.			
										lb.
Wallsend	1·333	79·96	6·26	7·08	·68	1·25	4·77	2·75	61·86	13·20
Waratah	1·303	81·06	5·81	6·52	1·23	1·14	4·24	2·21	59·97	14·30
A. A. Co., Newcastle	1·297	78·76	6·34	7·28	·79	1·36	5·47	2·20	62·87	12·92
Greta	1·287	78·41	6·60	9·34	1·43	1·44	2·78	2·25	57·13	13·21
Russell's Mine	1·274	77·37	6·48	10·46	1·51	1·43	2·75	1·85	52·65	13·21
Anvil Creek	1·323	77·15	5·91	6·07	1·46	1·48	7·93	1·74	55·70	12·65
Cardiff Mine	1·286	82·25	4·38	6·95	1·03	·35	5·04	1·85	54·43	......
Mean	1·300	79·28	5·97	7·67	1·16	1·21	4·71	2·122	57·80	13·25
British Coals (mean)	1·279	80·40	5·19	7·87	1·21	1·25	4·05	0·63 to 9·13	61·00	14·82

Analysis of Western District Coals.

Locality.	Specific gravity.	Composition per cent. exclusive of water only.						Water per cent.	Coke per cent.	Carbolic intensity calculated.	Water at 212° converted into steam by 1 lb. coal.
		Carbon.	Hydrogen.	Oxygen.	Nitrogen.	Sulphur.	Ash.				lb.
Eskbank	1·335	72·30	5·43	6·65	·85	1·60	13·17	2·00	62·88	74·26	12·65
Bowenfels	1·399	70·72	5·65	9·65	·93	1·38	11·67	2·36	......	72·45	12·65
Lithgow	1·329	69·41	6·10	11·70	1·03	1·44	10·32	1·95	62·46	72·06	12·10
Vale of Clwydd	1·323	69·86	5·82	11·89	1·02	1·40	10·07	2·10	63·18	71·38	12·10
Mean	1·346	70·57	5·75	9·97	·96	1·45	11·31	2·10	62·84	72·54	12·37

Analysis of Southern District Coals.

Locality.	Specific gravity.	Composition per cent. exclusive of water only.						Water per cent.	Coke per cent.	Carbolic intensity calculated.	Water at 212° converted into steam by 1 lb. coal.
		Carbon.	Hydrogen	Oxygen.	Nitrogen.	Sulphur.	Ash.				lb.
Nattai	......	91·24	3·60	0·59	......	trace.	4·56	3·28	92·37	85·90	undetermined.
Mt. Kembla	1·363	80·67	5·30	1·58	·70	·87	10·88	1·50	......	82·70	13·21
Mt. Keira	1·379	78·82	5·17	3·87	1·33	1·00	9·81	1·15	74·35	79·83	12·92
Berrima	1·364	69·92	4·55	13·09	·56	1·30	10·58	1·70	64·24	66·53	11·82
Bulli	1·471	76·35	4·75	5·04	......	·55	13·31	1·03	74·78	......	12·21
Mean	1·394	79·40	4·67	4·83	·52	·74	9·82	1·73	76·43	78· 7	12·54

KEROSENE SHALE.

Shale deposits.

This mineral is found in various parts of the Colony, but principally at Hartley, Blackheath, Bathgate, near Wallerawang, Joadja Creek, Berrima, Mount Kembla, Burragorang, Lake Macquarie, and Greta, and also at Colley Creek, near Murrurundi, and lately in the Capertee District, in the valley of the Wolgan River. The shale occurs in saucer-shaped deposits, varying in thickness from a few inches to 6 feet. It is a species of cannel-coal, similar to the Boghead mineral of Scotland, but yielding a much larger percentage of volatile hydro-carbon than the Scotch mineral. The richest quality yields upwards of 150 gallons of crude oil per ton, or 18,000 cubic feet of gas, with an illuminating power of thirty-eight or forty-eight sperm candles. The specific gravity is 1·06, amount of sulphur 0·49 per cent., and yield of tar 40 gallons per ton. It is found advantageous for mixing with ordinary coal for the manufacture of gas, and is largely exported to Great Britain, America, and other foreign countries, as well as the neighbouring colonies, for gas purposes. On analysis the following result was obtained from average specimens :—

Volatile Hydro-carbons, including moisture......	82·50	per cent.
Fixed Carbon..	6·50	,,
Ash..	11·00	,,

Quantity and value of shale raised.

Though analyses of this mineral have proved that payable seams occur in many places, only two companies have as yet systematically worked kerosene shale in the Colony—the New South Wales Shale and Oil Company, at Hartley, and the Australian Oil and Mineral Company, at Joadja Creek. These companies not only raise shale for export, but also manufacture from it petroleum oil and other products. The quantity and value of kerosene shale raised since the opening of the mines in 1865 amounts to 516,121 tons, of the value of £1,156,782, as shown in the following table.

Kerosene Shale raised in New South Wales.

Quantity	Average price per ton.	Total value.	Year.	Quantity.	Average price per ton.	Total value.
Tons.	£ s. d.	£		Tons.	£ s. d.	£
570	4 2 5·47	2,350	1878	24,371	2 6 11·40	57,211
2,770	2 18 10·14	8,150	1879	32,519	2 1 1·96	66,931
4,079	3 14 9·21	15,249	1880	19,201	2 6 7·03	44,725
16,952	2 17 7·11	48,816	1881	27,894	1 9 2·59	40,748
7,500	2 10 0	18,750	1882	48,065	1 15 0	84,114
8,580	3 4 3·18	27,570	1883	49,250	1 16 10·77	90,861
14,700	2 6 3·91	34,050	1884	31,618	2 5 7·86	72,176
11,040	2 11 11·91	28,700	1885	27,462	2 8 11·62	67,239
17,850	2 16 6·60	50,475	1886	43,563	2 5 10·79	99,976
12,100	2 5 1·48	27,300	1887	40,010	2 3 10·43	87,761
6,197	2 10 0·3	15,500	1888	34,869	2 2 2·66	73,612
15,998	3 0 0	47,994	Total	516,121	2 4 9·91	1,156,782
18,963	2 9 0·81	46,524				

Yearly output of shale compared.

mpared with the years 1882 and 1883, the production of the years 1884 and 1885 exhibits a considerable decrease, some- compensated for by the higher price obtained for the shale. year 1886, however, shows a renewal of activity in the pro- on of this mineral, though a tendency to decrease is again rvable in 1888. The cause of the irregularity in the quantity nale mined will probably be found in the uncertainty of the and for export, although the quantity required for local con- ption has also greatly varied. During the six years, 1883–8, total export was 110,752 tons, while the amount for home umption was 116,020 tons.

DIAMONDS AND GEM-STONES.

Number of diamonds found.

The existence of diamonds and other gem-stones in the territory of New South Wales has been known for many years, but no attempt had been made to work the deposits until the year 1884, when a company was formed to develop the mines, near the town of Bingera. In the course of the following year, several deposits of diamantiferous wash were discovered in the country round Inverell, in the New England district. Operations, however, have been confined to a preliminary testing of the claims, and some very good results have been obtained.

The number of diamonds found in the Colony to the end of 1887 is estimated at 75,000, the largest being one of 5⅝ carats, or 16·2 grains. The diamonds occur in old tertiary river drifts, and in the more recent drifts derived from them. The deposits are extensive, and have not yet been thoroughly prospected. The New South Wales diamonds are harder and much whiter than the South African diamonds, and are classified on a par with the best Brazilian gems. During the year 1887 the diamond companies at Cope's Creek, near Bingera, produced above 23,000 diamonds, weighing 5,151 carats; but in 1888 owing to the severe drought which occurred, the search for diamonds had to be temporarily abandoned. With efficient methods of working, this industry bids fair to become a profitable one.

Distribution of gems.

Diamonds and gem-stones have also been found in other parts of the Colony besides the New England District, and the late Dr. Böhme, a geologist of some merit, who for many years resided at Wellington, obtained from the surrounding country specimens of the whole series of gem-stones known to commerce. This industry, however, has not yet received the attention which it deserves. During the year 1887 a discovery was made in the western districts of gem-stones, which at first, on account of their great hardness and colour, were believed to be rubies. On examination by European specialists, however, these stones proved to be garnets, which, although considerably less valuable, are nevertheless payable as an article of commerce.

MARBLE, BUILDING STONES, FIRE-CLAYS, AND SLATES.

Marble limestone.

The Colony possesses a most abundant supply of all the various kinds of stone, and other materials, for the building and adornment of its cities. Marble limestone is found in great masses near Wallerawang, Bathurst, Marulan, Tamworth, and Kempsey, localities which are all within convenient distance of the great arteries of communication, and it is obtainable in all its different varieties. Marble quarries have been opened at Cow Flat, Marulan, Wallerawang, Orange, and Tamworth, but only those of Cow Flat and Marulan are being worked. Granite is found near Goulburn, Moruya, and Trial Bay, as well as at many other places throughout the Colony. Most of the granite hitherto used in Sydney has been obtained from Moruya, a port about 180 miles south of Sydney.

Granite.

Building stone.

The Hawkesbury formation, over which the City of Sydney is built, provides the city with an inexhaustible supply of sandstone, of the highest quality for building purposes. This material is admirably adapted for architectural effect, being of a pleasant colour, fine grain, and very easily worked. The beauty of Sydney street architecture is due in no inconsiderable degree to the free use of this excellent sandstone.

Fire-clays.

The coal measures also contain numerous beds of fire-clays, and in every part of the Colony excellent clays, well adapted for brick-making purposes, are extensively worked. Slates are found in several districts, but are principally quarried at Gundagai, and in the surrounding district, as well as near Bathurst and Goulburn. It will be seen, therefore, that the Colony has no need to import building material of any description, as it possesses a supply amply sufficient to provide for its own wants and those of its neighbours.

Building materials.

PART VII.

Flora.

THE surface of New South Wales presents a vegetation characterized by little variation in form and colour. The dense foliage and varieties of tints with which the old world is familiar are alike wanting in Australia, where the dull evergreen leaves alter little with the changes of the seasons. What the flora of the country lacks in picturesqueness it, however, makes up in usefulness. The task of collecting, describing, and classifying the Australian flora has been undertaken by several eminent scientists, amongst whom are Bentham, Müeller, and Hooker. The "Flora Australiensis" of the two first-named botanists, Hooker's "Flora of Tasmania," the "Census of Australian Plants," and the "Eucalyptographia" of Baron von Müeller, are works of standard value. In dealing, however, with the description of the varied specimens of plant life found in Australia there remained the task of describing those species whose properties rendered them capable of application to industrial life. To Mr. J. H. Maiden, of the Sydney Technological Museum, the Colony is indebted for an excellent classification of those varieties which properly belong to Australian economic botany. The number of specimens so far described in each class will be found below, and it will probably appear to many as a revelation that the country should possess resources so varied and elements of wealth so promising, and at the same time so singularly neglected.

Australian economic Botany.

Classification of Australian plants of economic value :—

Classification of Plants.	Number of varieties.
1. Human food and food adjuncts	212
2. Forage plants—	
a. Grasses	158
b. Exclusive of grasses, and including plants injurious to stock	92
3. Drugs	123
4. Gums, resins, and kinos—	
a. Gums	40
b. Resins	21
c. Kinos	39
5. Oils—	
a. Volatile or essential	47
b. Expressed or fixed	10
6. Perfumes	14
7. Dyes	35
8. Tans	87
9. Timbers	630
10. Fibres	67
11. Miscellaneous	38
Total	1,613

It does not come within the scope of this volume to deal at length with a subject so comprehensive as economic botany; it may, however, be pointed out that beyond some of the timber trees and a very limited number of oils and tans, few of the resources of the Colony disclosed in the foregoing list have received any practical application.

Forests.

Forests extend over almost the whole area of the Colony, excepting portions of the Monaro, the Lachlan, and the Murrumbidgee districts, where extensive treeless plains occur, clothed with salt-bush, scrub, or varieties of natural grasses. The country covered by timber may be divided into three classes—open, brush, and scrub forests. Open forests cover the greatest portion of the surface of the Colony, and are found in every formation. The varieties of trees met with are chiefly species of the Eucalyptus tribe, and Melaleuca, Callistemon, and other genera of the order Myrtaceæ.

Prevalence of eucalypti.

The prevalence of the eucalypti, and the large extent covered by the forests, give the country a rather monotonous aspect. But the park-like appearance of the open forests and the beauty of the many flowering shrubs win admiration, in spite of the sameness of the trees; while even the dull, greyish blue of the foliage of the gum-trees, when relieved by the yellow blossoms of the wattle, the graceful myall, or the beautiful and shapely kurrajong, is not without its attractiveness. The trees are for the most part straight and cylindrical in the trunk, and when full grown, their first branch is at a considerable height from the ground. The roots of the eucalyptus lie at no great distance from the surface soil, an adaptation of nature to the peculiar climatic conditions of the country. The finest specimens of most of the timber trees, those yielding the most valuable timber, are found on ridges and hill sides, in places frequently too rough and stony for cultivation. This circumstance is in many ways fortunate for the Colony. In the course of settlement, when the rich plains are denuded of their trees, and when scarcity will make timber more appreciated than at present, land not adapted for agricultural settlement will still be available for the cultivation of the finest trees. It would be impossible, in the limits of this volume, to enumerate all the trees which are of commercial value; but a list of the best known varieties will not be without interest.

Chief varieties of timber trees.

On the river flats immense specimens of flooded gum *(E. rostrata)* and apple-trees *(Angophora subvelutina)* mark the course of the streams. The flooded gum grows to a height of 100 feet, and its wood is most useful for heavy work, and for structures liable to attack by the white ant. The apple-tree has more spread than the majority of indigenous trees, its wood is strong, heavy, and durable. The distribution of the species is very extensive.

On the ridges and mountain sides other varieties of trees predominate. The box reaches 180 feet in height, with a thickness of 6 feet, and the timber is used chiefly for firewood, for which purpose it has no superior. The bastard box, supposed to be a cross between the box and grey gum, is widely distributed over the Colony. The quality of the timber varies greatly, according to the place of growth; some varieties are surpassed amongst hard woods by nothing except ironbark.

Ironbark.

Ironbark *(E. leucoxylon* and *E. paniculata)* is a tree of moderate size, usually when full grown from 60 to 80 feet in height, though the white ironbark attains a height of 150 feet. The timber is heavy, and renowned for its great strength, fine specimens bearing a tensile strain nearly twice as great as the best oak. The timber is used most extensively for wharves and bridges, as also for housework. Ironbark is very widely distributed, and frequently grows to perfection on the poorest soil. The ironbark and box are slow growing trees, as compared with many other varieties of eucalyptus, such as the blue gum, which latter attains a great height in a very few years.

Blue gum.

The blue gum *(E. globulus)*, one of the finest of the eucalyptus tribe, is only met with in portions of the southern table-land, but the blue gum *(E. goniocalyx)*, also called flooded gum, grows extensively in the coastal districts. It attains a moderate height, but is rather thicker in the trunk than most varieties of gum trees, sometimes reaching 7 feet in diameter. The timber is greatly in demand, owing to its comparative lightness, and is easily worked, being used for all purposes to which hardwood is applied.

Spotted gum.

The spotted gum grows in all the coast districts, and in some portions of the interior, generally where the soil is poor. This is one of the handsomest of the forest trees, and attains a height of 100 feet. The quality of the wood varies greatly, according to the habitat and the character of the soil; when good, it is considered specially adapted for ship-building.

Stringybark

Stringybark, so called from its peculiar fibrous bark, grows chiefly on the northern table-lands. It is a large tree, and its wood is of great and general utility. The bark is extensively used for thatching, and forms a very useful paper-making material.

The messmate *(E. obliqua)*, also called stringybark, is one of the largest of Australian trees, being frequently met with more than 250 feet in height. It grows in the south-eastern portion of the Colony. The bark is used for thatching, being similar in character to that of the tree just described; it would also form an excellent paper-making material.

Blood-wood.

The blood-wood is a large tree, growing in the coastal districts of the Colony. The timber is used chiefly for fencing purposes, and for railway sleepers.

Grey gum.

The grey gum *(E. tereticornis)* grows to a height of 150 feet, and is extensively distributed over the whole of the coastal districts. It yields excellent timber, hardly inferior to ironbark. There are several varieties of this tree, some of which produce wood of remarkable beauty, and of great durability.

Tallow-wood.

The tallow-wood is a very large tree, growing extensively in the forests north of Sydney. Its wood is more easily wrought than most of the hardwoods, and has great strength and durability, being employed largely for floors, and other building purposes, and for the decking of ships.

Mountain ash.

The mountain ash, or white-top, is found both on the table-lands and in the coast districts. Its timber is in demand for coopers' work, and for rough carpentry. The tree grows to about 150 feet in height.

Turpentine tree.

The turpentine tree *(Syncarpia laurifolia)* is found mainly in the district lying between the Shoalhaven and the Macleay. It grows to magnificent proportions, sometimes reaching a height of

200 feet, with a diameter of 6 feet. The timber is largely used for piling, and other work in sea-water, as it resists the attack of the teredo better than any other New South Wales timber.

BRUSH FORESTS.

Features of brush forests

The brush forests cover a considerable extent of country along the coast. The trees found in them differ entirely from those of the open forests, and there is no lack of variety either in the character of the trees or the colour of their foliage. Tall graceful fern trees, sometimes attaining a height of 60 feet, beautiful varieties of palms, cabbage-trees, and Moreton Bay figs of enormous proportions, are prominent features of the brush, though these are perhaps more ornamental than useful. There are, however, found in the brush forests timber trees of the greatest value.

Red and white cedar.

The red and white cedar *(Cedrela toona* and *Melia composita)* were once abundant in the northern forests, but at present most of the full grown trees are met with only on the high ridges. The red cedar is a magnificent timber tree, often attaining a height of 150 feet, with a girth of over 30 feet. Its timber is of great value, being light, easily wrought, durable, splendidly grained, and well adapted for furniture and cabinet-making. The white cedar is a pretty tree growing to a height of 80 feet, with a diameter of 3 feet. Its timber is soft and easily worked, but is deficient in tensile strength and durability, and therefore in no great demand.

Silky oak.

The silky oak grows to the height of almost 100 feet, under favourable circumstances, and yields a wood highly prized for staves.

Tulip-wood.

The tulip-wood is a tall tree with beautifully marked timber of various shades, and susceptible of a fine polish.

Ash.

The ash, or pigeon berry-tree, grows to a great height, sometimes reaching 130 feet, with a diameter of 5 feet. Its timber is light and tough, and in good demand.

Colonial pine.

The colonial pine (*Araucaria Cunninghamii*) is one of the finest trees of Australia, sometimes reaching a height of 200 feet, with a trunk 5 feet thick. Its timber is extensively used, being cheaper than any imported pine; it is white in colour and easily wrought.

Beech.

Native beech is also a tree of noble proportions, reaching 150 feet in height. Its timber is greatly in demand, being superior to most native timber when exposed, as it neither shrinks nor warps. In colour the wood is white or silvery, with a fine close grain.

Besides the varieties mentioned above, there are in the brush forests many other trees, yielding timber of large size and of great value, but the abundance of timber of other descriptions more readily accessible, has hitherto satisfied the local demand, and the resources of these forests have been almost entirely overlooked.

Great variety of timber in brush forests.

The character of the vegetation of the brush forests alters considerably according to the latitude. The trees of the Araucaria and Flindersia tribes, as well as the principal varieties of cedar, find a home chiefly in the northern parts of the Colony, while many of the trees growing in the south have no representatives in the northern forests. The soil of the brush lands is wonderfully fertile, consisting as it does of decomposed volcanic rocks, enriched by the accumulation of decayed vegetable matter, and when cleared yields an abundant return.

SCRUB FORESTS.

The scrub forests are found in the poor soils, principally in the Lachlan and Darling districts. The chief species represented are the pine, the acacia, and the eucalyptus, but although some of the trees are of great beauty, they have little commercial value. The most uninviting portion of the Colony is covered with scrub, and the mallee districts, clothed as they are with stunted timber, a variety of the eucalyptus, impress the traveller more unfavourably than would even a barren waste.

Dividing the timber trees of New South Wales into the natural divisions of hardwoods, softwoods, and pinewoods, the largest portion, both as to the variety of trees and the area covered by the forests, comes under the first-mentioned class. All the trees already referred to as growing in the open forests are hardwoods; and besides those described there are many others, of recognized commercial value, which are extensively used.

Hardwoods.

Australian hardwood trees are remarkable for the great size of the beams which may be obtained from them, as well as for the great toughness and durability of their wood. In a subsequent table the mean tensile strength of various timbers is given, from which it will be seen that the grey ironbark has a tensile strength of 6·14 tons per square inch, as compared with the maximum of 3·38 tons for English oak, and 1·47 tons for teak. None of the other timbers has so high a tensile strength as this description of ironbark, but nearly all the varieties have a greater tensile strength than oak. As already pointed out, the quality of the wood is materially influenced by the soil on which the trees grow, and the great range of strength given for some woods is due to this cause. The absence of branches for the greater portion of the height enables the timber to be obtained to the best advantage; and as full-grown trees of most varieties are rarely less than 100 feet high, with corresponding girth, the quantity of timber obtainable is very large.

Softwoods.

Beauty of brush timber.

The softwoods of the Colony are found chiefly in the brush forests of the coast district, and rival those of any other part of the world. Some of the least known of the brush forest trees have wood grained and marked most beautifully, which is capable of receiving the highest polish, while others are fragrantly perfumed. These woods are adapted to the finest description of cabinet-making, and it is strange that their merits should have so long escaped attention. Amongst the chief varieties of woods of this class may be mentioned the red cedar, now unfortunately disappearing, whose beautiful wood, somewhat resembling mahogany, is admirably adapted for the finer kinds of cabinet-makers' work. Some of the cedar trees grow to immense size, as much as 2,500 cubic feet of valuable timber having been obtained from one tree. In addition to the cedar may be mentioned rosewood, tulipwood, yellowwood, white maple, white beech, myall, marblewood, mock orange, and many others. Besides their use for cabinet-making, many of the brush timbers are of great utility for the rougher kinds of carpentry, while some, both hard and soft woods, are admirably adapted for coachbuilders' and coopers' work.

Pinewoods.

The chief description of pine growing in New South Wales is the Moreton Bay white pine, found in the coast districts, as far south as the Bellinger. It is soft, light, and easily wrought, and suitable for all the interior wood-work of houses, as well as for cabinet-making. The red or black pine is extensively distributed over the Liverpool Plains, and in the Lachlan and Darling River districts, as well as around Berrima. It is beautifully marked in the grain, takes a fine polish, and has an agreeable fragrance. There are numerous other varieties of pine, but these resemble in their main features the trees already described.

Colonial deal is an excellent timber, and is obtained in very large scantling, the tree frequently reaching 120 feet in height. It is soft, close-grained, easily wrought, and remarkably free from knots. Its use, therefore, is extensive for cabinet-makers' work and house fittings.

Importation of timber very large.

Notwithstanding the great resources of the Colony as a timber-growing country, the importation of wood is very considerable. In 1888 the quantity amounted to 18,429,000 feet of dressed timber, valued at £152,900, and 58,453,206 feet of undressed, valued at £362,262; besides which there were sundries to the value of £12,672, the total value of timber imported being £527,834.

The importation of timber is chiefly from the United States, New Zealand, Great Britain, British Columbia, and Scandinavia. From the western sea-board of the United States the Colony receives its largest supply, the importations during 1888 amounting to 1,971,637 feet of dressed, and 21,430,524 feet of undressed, or rough timber, a quantity equal to over 30 per cent. of the whole. This timber is chiefly what is known as Oregon pine. Next to the United States comes New Zealand, from which the Colony received 1,873,817 feet of dressed, and 14,518,719 feet of undressed, timber, mostly kauri pine. **Importation of timber.**

The export of colonial hardwood is relatively small as compared with the timber imported. During the year 1888, 255,889 feet of dressed timber, valued at £2,187, and 32,519,134 feet of rough or undressed, valued at £118,904, also sundries to the value of £461, or a total value of £121,552, were exported. **Exportation of timber.**

During the six years which closed with 1888, the exports of New South Wales timber were:— **Exports.**

Year.	Dressed Timber.	Undressed Timber.
	Feet of 1 in. thick.	Feet of 1 in. thick.
1882	132,894	5,771,868
1883	218,517	8,611,237
1884	320,093	14,239,211
1885	203,930	9,777,797
1886	133,973	13,255,804
1887	179,572	15,541,220
1888	255,889	32,519,134

It will be seen that the quantity exported varied greatly; this is entirely due to the fluctuation in the amount taken by

Victoria. In the years 1884–8 large public works were being executed in that colony, requiring considerable quantities of hardwood, which was more readily procurable from New South Wales. Out of a total export of 14,239,211 feet of undressed timber in 1884, Victoria took 11,170,536; in the following year out of 9,777,797 feet 6,696,653 feet went to Victoria, and during 1886, 10,553,955 feet were taken by that colony, out of a total export of 13,255,804 feet, while in 1887 Victoria took 11,165,833 feet, the total export being 15,541,220, and in 1888, 26,465,056 feet out of a total of 32,519,134 feet of undressed timber exported.

Intercolonial exportation.

No necessity to import timber.

As already pointed out, although the Colony is endowed with great wealth of timber, not only of hardwood but of softwood and pine, the imports very largely exceed the exports. The imports, however, are chiefly pine and softwood. The pine grown in the Colony is in some respects inferior to both oregon and kauri, hence the large importation of these timbers, but the softwoods of the country will bear favourable comparison with those of any part of the world, both for durability and beauty. They are easily wrought and well adapted for the finer kind of carpentry and cabinet-work, and it is only because they are so little known that the softwoods of the brush forests have not been more extensively used.

Strength of N.S.W. timber.

The specific gravity and tensile strength of various New South Wales timbers, and of some of the best known European and other varieties, are shown in the following table. The information regarding Australian timbers is mainly derived from data published by Mr. W. H. Warren, M. Inst., C.E., in his brochure on the strength and elasticity of New South Wales timbers. The tensile strength has been computed from the formula of D. K. Clark.

$$S = \frac{W\,l}{1{\cdot}155\,b\,d^2}$$

when W = load applied at middle of beam between supports; b = breadth d = depth l = length of beam, and S = co-efficient of rupture or tensile strength per square inch.

other Varieties of Timber.

New South Wales timber trees.	Specific gravity.	Tensile strength per sq. inch. =8	European and other Foreign timber trees.	Specific gravity.	Tensile strength per sq. inch. =8
Hardwoods—		Tons.			Tons.
Spotted gum	·995	4·57			
Grey gum	·917	4·80	English oak	·893	1·713 to 3·380
Flooded gum	1·178	5·33	Teak	·745	1·474
Red gum	·995	2·38	Mahogany	·678	1·338
Woollybutt	1·022	4·37	English ash	·760	1·687
Blackbutt	1·067	4·83	Fir (Riga)	·541	1·808
White ironbark	1·177	5·82	Yellow pine	·551	1·231
Grey ironbark	1·182	6·14	Kauri pine (New Zealand)	·550	1·803
Red ironbark	1·224	5·59	Pitch pine (American)	·659	2·083
Forest oak	1·208	5·32	Cedar (American)	·439	1·281
Turpentine	1·109	4·03	Red Pine (Canada)	·553	1·207
Stringybark	1·141	4·79	Ironwood (Burmah)	1·176	4·311
Blackwood	1·129	3·53	Beech	·705	2·166
Tallowwood	1·233	5·24	Larch	·649	1·876
Australian teak	1·006	4·95	Greenheart (Guiana)	1·141	3·937
Mahogany	1·201	4·98	Elm	·642	2·437
Forest mahogany	1·156	4·73	Hornbeam	·819	2·860
Swamp mahogany	1·216	4·17			
White beech	1·008	5·36			
Mountain ash	1·065	3·96			
Rosewood	1·189	3·64			
Pine and Cedar—					
Murrumbidgee pine	·578	2·066			
Richmond River pine	·868	2·016			
Red cedar	·508	1·716 to 2·124			

FOREST CONSERVATION.

Destruction of timber.

The necessity of preserving the timber resources of the Colony, and preventing the ruthless destruction of the best species of brush and hardwood, hitherto carried on by settlers and timber-getters, principally in the Clarence River district, and in the eucalyptus forests on the Murray, decided the Government, in 1871, to establish a certain number of forest reserves throughout the country, in which permission to cut timber should be granted upon payment of a fixed fee. It soon became apparent that stringent regulations alone could put a stop to the reckless operations of the licensed timber-getters, but it was not until September, 1878, that such regulations were issued. These appeared not a day too soon, as the best species of cedar, which abounded in the Clarence River districts, had been exploited to such a wasteful extent that the supply of this magnificent timber threatened to give out. Cutting down indiscriminately trees of all sizes, and clearing the lower lands of their best timber, the cedar-cutters, after disposing of all that could be cheaply transported, or easily floated down the rivers in time of flood, left a considerable surplus of felled timber on the ground to lie and rot. They then travelled further north, to carry on the same depredations along the rivers of the neighbouring Colony of Queensland. The same system had been pursued in the gum forests of the Murray. Considerable quantities of excellent timber were destroyed in the forest reserves of that part of the Colony, to the detriment of the district, which was deprived of its natural wealth, and to the injury of the Colony at large, which suffered the loss of much of its best timber without receiving an equivalent in revenue.

Forest Conservation Branch formed.

In 1875, the office of Forest Ranger was first created, and this led to the formation of a Forest Conservation Branch attached to the Department of Mines, which was established in March, 1882. During the present year, however, the Forest Conservation Branch has been placed under the administration of the Colonial Secretary. In the year 1882 the Colony was subdivided into a number of districts. These are frequently inspected by forest rangers, whose duty is to report on the existing state of proclaimed reserves, control the operations of licensed timber-getters, receive royalties on the various kinds of timber, upon which such dues may be levied, and report upon applications to ringbark trees on Crown lands, whether comprised in State forests, reserves, or otherwise. The forest rangers and assistants employed by the department have the supervision of sixteen State forests with an area of 93,416 acres. The timber reserves throughout the Colony number 898, and cover an area of 5,542,875 acres, so that the total area of land devoted to the conservation of timber in New South Wales amounts to 5,656,294 acres.

Forest rangers.

Timber obtained from reserves.

On the reserves subject to royalty, the quantity of timber cut in 1887 amounted to 8,745,821 superficial feet, besides 1,207 trees for piles and other purposes. In 1888 the quantity of timber cut measured 19,679,069 superficial feet, in addition to which there were 933 trees felled.

Revenue from timber licenses.

The revenue derived from the issue of timber licenses, from royalty, permits, and other dues, amounted in 1888 to £19,019, and the revenue received from the forest reserves of the Crown since the coming into force of the regulations proclaimed on the 24th of September, 1878, in each of the following years was—

	£
1879	7,310
1880	8,328
1881	10,156
1882	12,327
1883	16,301
1884	17,565
1885	13,144
1886	13,934
1887	13,629
1888	19,019

or a total for 10 years of £131,713, which, before the introduction of the present system, would have been a loss to the country, without taking into consideration the much greater loss caused by the indiscriminate felling carried on in former years. Under the present regulations care is taken to preserve from

Girth of timber which may be felled.

destruction all timber below a certain girth, measured at a height of 5 feet from the ground, according to a careful classification of the various timbers at present in demand. Trees not named in this list may be cut at the minimum girth that may be endorsed on the license, or as specified in writing by the forest ranger in charge of the reserve.

The prescribed girth is set forth hereunder:

Hardwoods.

Timber.	Girth. ft.	in.	Timber.	Girth. ft.	in.
Blackbutt	7	6	Blood-wood	6	0
Tallow-wood	7	6	Mountain ash	6	0
Red gum or flooded gum	6	6	Mahogany (forest)	6	0
Gray gum	6	6	*Ironbark (red, gray, and broad-leaved)	6	0
Woollybutt	6	6	Peppermint or red-wood	5	6
Brush or white box	6	6	Swamp mahogany	5	6
Turpentine	6	6	*Stringybark	5	0
Blue gum	6	0	Blackwood	4	0
Spotted gum	6	0	Yellow and white box	4	0
Messmate	6	0			

Softwoods, &c.

Timber.	Girth. ft.	in.	Timber.	Girth. ft.	in.
Red cedar	9	0	Black, red, or white pine (Frenela)	3	0
Hoop or Moreton Bay pine	7	6	Swamp oak	3	0
White beech (Gmelina)	7	0	Forest oak	2	3
Silky oak	6	0			
Rosewood	6	0			

* West of Great Dividing Range, 4 feet.

State nursery and cultivation of trees.

The operations of the Forest Conservation Branch are not solely limited to the preservation of native trees. It is also charged with the creation of a State nursery, the site for which was selected at Wyong, in the beautiful district of Brisbane Water, where the acclimatization of valuable foreign timber trees, and the conservation of such of the best indigenous species as might be otherwise likely to disappear, are attended to. In 1888, 40,070 of various kinds of trees were raised for planting out in the forests, also a large quantity of seedlings and cuttings for 1890. The formation of plantations in various parts of the Colony, and along railway lines, also forms part of a programme which is yearly becoming enlarged. In the forest reserves of Orara and Dorrigo, in the north-eastern district of the Colony, cedar planting has been carried on for some years, under departmental super-

Plantations in forest reserves.

vision, and up to the end of 1888, 24,978 trees and root-cuttings of cedar trees, and self-sowing seedlings, had been counted in the latter reserve. Plantations of the American *Catalpa speciosa* were also made on the Railway Reserve at Cootamundra, where there are about 2,713 catalpa, black walnut, and other trees planted on the 6¼ acres cleared, and wattle plantations have been formed along the southern railway line from Minto to Burradoo. The total number of cedar trees planted to the end of 1888 was 46,878, in addition to which a large number of plants have been raised from seed.

The Forest Conservation Branch has collected a large number of varieties of indigenous timber trees, which were placed on view at the London Colonial and Indian Exhibition; and a second collection consisting of several hundred specimens of different kinds of colonial timber is now exhibited in the Geological Museum attached to the Department of Mines.

State forests and timber reserves.

Reserves for the preservation of timber are divided into two classes, viz., State Forests and Timber Reserves, and the latter are subdivided into three sub-classes, A, B, and C, according to their importance, and the particular quality and value of the timber which they contain.

Timber licenses and permits.

Licenses are issued to cut timber on reserves in class A at a fixed fee of £6 per annum, or 10s. per month, and without royalty; on reserves in class B the fee demanded amounts to £9, or 15s. per month; on reserves in class C general permits to cut timber for saw-mills are issued at a rate of £6 per annum, to which is added the payment of a royalty, which differs according to the value of the timber felled, and is based on the following classification:—

Saw-mill timber placed in the 1st class, 1s. 3d. per 100 superficial feet.
" " 2nd " 1s. " "
" " 3rd " 9d. " "
" " 4th " 6d. " "
" " 5th " 3d. " "

Timber-cutting on Crown lands.

Licenses are also issued to cut and remove timber on ordinary Crown lands—excepting State forests, timber reserves, reserves for public recreation, or sites for towns and villages, or permanently dedicated for any public purpose; also lands within 1½ chain of any navigable river, or held under conditional lease, measured for sale, within an enclosure of less than 200 acres, or within half a mile of a head station. The fee in this case is fixed at £3 per annum, or 15s. per quarter, or 5s. for any current month, and the license enables the holder to cut and remove any kind of timber, except cedar. The license fee for cutting cedar, and for shipping wattle-bark, is fixed at £6 per annum, and no cedar-tree of less girth than 9 feet, measured at 5 feet from the ground, may be felled without special authority.

Permits to cut and strip bark.

Permits are issued for cutting mining props, and for thinning out timber, in order to improve the growth of the trees remaining; for cutting and removing from a reserve a specified number and kind of trees; and also for stripping wattle-bark, or the bark of other trees for tanning purposes.

Penalties.

Infringements of the timber regulations are punishable by fine, not exceeding £5 for the first offence, £10 for the second, and £20 for the third, irrespective of the value of the timber and material destroyed, for which also the offender may be held responsible.

PART VIII.

Fauna.

HE fauna of New South Wales is characterised by the absence of the forms of animal life familiar to the Old rld, and the presence of genera and species peculiar to the stralian Continent.

MAMMALIA.

he order of mammalia is represented in this Colony by the st animal known, the marsupial, which is extinct in other s of the world. The Macropidæ include several kinds of garoos and wallabies, the characteristics of which are too known to need more than passing reference. The progress ettlement has driven these animals from the more densely-lated parts of the Colony, but in the country districts they still numerous enough to cause very considerable damage to natural grasses. So serious has been the injury thus wrought, the State and run-holders pay a small sum per head for destruction of these animals. The number of kangaroos and abies, as estimated by Inspectors of Stock, existing in the ny in 1888, was about 4,600,000, and no fewer than ,320 kangaroos and 653,590 wallabies, a total of 1,310,910 nals, were destroyed during the year 1888.

Number of kangaroos, &c.

he genus Paramelidæ is represented by the wombat, and ral kinds of rats and rabbit-rats, which latter burrow under-nd like their European prototype. They abound particularly he western districts.

Phalangystæ.

he Phalangystæ, which embrace several varieties of opossums, found in all parts of New South Wales. Some of the specimens of this family are very handsome, and their thick soft furs afford a valuable article of commerce.

Dingo.

The dingo, or native dog (*Canis Dingo*), is found in all parts of the Australian mainland. It will inbreed with the domestic dog, and crosses are common throughout the settlements. The dingo does not bark, and, according to Dr. Geo. Bennett, it is allied to the wild dog of India, and may probably have been introduced by the Malays some centuries ago. Great destruction has been wrought amongst the flocks of the settlers by these animals, and a price is paid for every native dog destroyed.

Native Cats.

There are two varieties of native cats (*Dasyurus Maculatus* and *D. Viverrinus*), both very handsomely marked. They are nocturnal animals, incapable of domestication, and prey upon birds and small mammals.

Echidnæ.

The Echidnæ are represented by several varieties of spiny ant-eaters, somewhat resembling the English hedgehog. The favourite food of these animals is the various kinds of ants, which are found all over the country. The Echidna carries its young in a pouch, which is only visible in the female during the breeding season.

Flying foxes, and numerous varieties of bats, are also indigenous to New South Wales, and make great depredations among the fruit-trees.

Platypus.

Of all the animals found in the Colony the most curious and interesting is, perhaps, the *Ornithorhynchus paradoxus*, or Duck-billed platypus, called by the aborigines the Mallangong or Tambreet. This animal is a mammal, and has now been authoritatively shown to be also oviparous. The eggs brought forth are membranous, so that the platypus must be classed amongst the Reptilia.

Most of the animals above mentioned appear to be more destructive than useful, and if we except the trade in opossum and native-cat furs, and kangaroo skins, the commercial value of the indigenous mammals is very small. They are being gradually displaced, as civilisation advances, by the more useful animals of the Old World, for which the climate of New South Wales seems especially adapted, and which now form the principal source of the wealth of its inhabitants. The acclimatisation of the more useful European species quickly follows the destruction of indigenous animals, and the wilds of the western districts of the Colony, which erstwhile were the abode of the kangaroo and dingo are now the home of vast flocks.

Destruction of native animals

Extinct species.

Geological research has brought to light the remains of numerous extinct species of gigantic mammalia. The largest of these prehistoric animals was the *Diprotodon*, a marsupial quadruped, which, according to Professor Owen, was as large as the rhinoceros or hippopotamus. Fossil remains of another large marsupial, the *Nototherium*, somewhat resembling a tapir, and of a marsupial lion (*Thylacoleo*) have also been discovered. Bones of gigantic kangaroos (*Macropus titan*) have been frequently met with, as well as those of a species of wombat larger than that actually in existence.

The remains of animals belonging to two distinct genera, representatives of which still exist in Tasmania, the *Thylacinus*, or pouched hyena, and the *Sarcophilus*, more commonly known as the Tasmanian devil, have also been found in the fossilised state.

BIRDS.

Variety of birds.

All the more important families of birds are represented in the fauna of New South Wales, which contains also a number of families peculiar to the Colony. Few countries can boast of a greater variety of beautiful birds. The parrot family is represented by a large number of species, including the love bird, the green parrot, and many kinds of lories, all gorgeously clothed; and amongst the larger species, the white and black cockatoo, yellow and pink-crested, and the grey pink-crested gallahs. The family of honey-eaters *(Meliphagidæ)* is also represented by numerous and very beautiful varieties.

Amongst the larger kinds of birds found in the Colony are the *Megapodidæ*, which includes the brush turkey. These exist in great numbers in the western parts of the Colony, and their flesh is highly prized. In the western districts are also found the emu, the largest of Australian birds, and the native companion, a large water bird, somewhat like the crane in appearance.

Emu.

In the more thickly-timbered parts of the brush forests, the home of the stately tree-fern, is found the lyre-bird *(Menura superba)* a species of pheasant, whose tail forms a most graceful ornament. Here also abound the satin-bird, species of regent-birds, and the rifle-bird, all famed for the beauty of their plumage.

Aquatic birds.

The kingfisher.

Amongst water-birds are several species of cranes, and enormous numbers of wild fowl of all descriptions, as well as black swans. The latter is essentially an Australian bird, and may be met with in all parts of the Colony. The great kingfisher, or laughing-jackass, so named from its extraordinary cry, is one of the most useful of birds, owing to the readiness with which it destroys snakes. Magpies and mocking-birds may be included amongst those denizens of the forest which more prominently attract the attention of travellers. There are also several species of owls, and other night-birds, and the eagle family has not a few representatives.

The pigeon tribe.

The pigeon tribe is found in large numbers, especially in the great primæval forests of the coast districts. In the cedar brushes of the Liverpool Range white-headed fruit pigeons are very numerous; and in the brush forests of the Clarence, the Richmond, the Macleay, and Illawarra, the top-knot and large-tailed pigeons, and the Wonga Wonga *(Leucosarcia picata)*, so prized for its large size and the whiteness and delicacy of its flesh, are very plentiful. The bronze-winged pigeon is common to almost all parts of the Colony. Several varieties of these birds are remarkable for their beautiful plumage, their size, and the excellence of their flesh. One of the finest varieties, the partridge bronze-winged pigeon, is found almost exclusively in the plains of the interior. Doves are also numerous, and most of the species are extremely delicate and beautiful. The little turtle-dove of the Murray River *(Geopelia cuneatra)* is the prettiest specimen of this family.

Other varieties.

Besides the varieties of birds mentioned above there are others, of perhaps less note, but numerous, and frequently very beautiful. They are all admirably described and depicted in the celebrated work of Dr. Gould, which occupies a high rank amongst the scientific publications of the century.

FISHES.

Fishing industry neglected.

The seas which wash the shores of New South Wales abound with fish, but none of the resources of the Colony has been so much neglected as the fishing industry. All the best fishing-grounds lie within a moderate distance of Sydney, and as recently pointed out by the Fisheries Commission, it is not necessary, in order to obtain the fish most adapted for food, to despatch large smacks or fishing vessels, victualled and equipped for a cruise of several months, to fishing grounds distant hundreds of miles from home. The coast of the Colony presents many natural features peculiarly favourable to the existence of a very large supply of the best food fishes. In the quiet waters of its numerous bays and estuaries, and in the vast lakes and lagoons communicating with the sea, are found shelter and sustenance, as well as excellent breeding-grounds. The principal fishes found on the coast are not migratory, and as a consequence may nearly always be procured in the market.

Classification of fishes.

Sixty different families of fishes comprising 348 species are found in New South Wales waters. According to the classification of the Rev. J. S. Tenison-Woods, S. J., these are as follows :—

Name of family.	No. of species.	Name of family.	No. of species.
Percidæ	50	Ophiocephalidæ	1
Squamipinnes	4	Trachypteridæ	1
Nandidæ	2	Pomæcentridæ	4
Mullidæ	3	Labridæ	18
Sparidæ	14	Gadopsidæ	1
Cirrhitidæ	6	Gadidæ	4
Scorpænidæ	11	Pleuronectidæ	9
Teuthididæ	2	Siluridæ	5
Berycidæ	3	Scopelidæ	6
Kurtidæ	2	Salmonidæ	1
Polynemidæ	2	Galaxidæ	7
Sciænidæ	2	Scombresocidæ	6
Xiphiidæ	1	Culpeidæ	12
Trichinridæ	1	Chirocentridæ	1
Acronuridæ	1	Symbrachidæ	1
Carangidæ	15	Murænida	11
Cyttidæ	1	Syngnathidæ	6
Coryphænidæ	2	Sclerodermi	21
Scombridæ	10	Gymnodontes	12
Trachinidæ	5	Carcharidæ	8
Batrachididæ	1	Lamnidæ	1
Pediculati	4	Scyllidæ	3
Cottidæ	7	Cestraciontidæ	2
Cataphracti	1	Spinacidæ	1
Gobiidæ	15	Rhinidæ	1
Blenniidæ	17	Pristiophoridæ	1
Syhyrænidæ	3	Rhinobatidæ	2
Atherinidæ	4	Trygonidæ	3
Mugilidæ	7	Torpedinidæ	1
Fistularidæ	1	Raiidæ	1

The edible fishes comprise 105 different species; amongst the best known may be mentioned :

The schnapper.

The schnapper *(Pagrus unicolor)*, the most valuable of all Australian fishes, is found along the whole extent of the coast, and is very abundant. It is a deep-water fish, found generally near rocky points or reefs running out into the sea. The schnappers "school," as it is termed, during the summer months, and are then most plentiful. The young fish, known as red bream, frequents the harbours and estuaries of the coast, but is never found in shallow water. The schnapper is caught by the hook, which it takes freely, as it will attack almost any bait. It sometimes attains a very large size, weighing as much as 30 lb.

Nannigai.

The nannigai is a deep-water fish, caught with the hook, and ranks high in public estimation as an edible fish. The supply is not large, as the fish is not specially sought after, being chiefly obtained by fishermen in search of schnapper. The nannigai is scientifically interesting as one of the oldest forms of bony-fishes now surviving.

Rock-cod.

The black rock-cod is considered one of the best of Australian fish, and is also a deep-water fish, never captured by the net. It is found more abundantly in the warmer waters of the north of the Colony, where, as a rule, it attains larger proportions than to the southward of Sydney. It grows to a great size, specimens from 35 to 40 lb. being not uncommon.

A fish of great size and beauty, known in Australia as the salmon, is found off the coast in prodigious quantities. It has no affinity whatever to the true salmon, and is inferior as an article of food.

The flathead, a fine fish, of which there are several varieties, is captured both by the hook and net. It is of excellent quality and ranks high amongst New South Wales fishes.

Whiting.

There are four species of whiting found in these waters. The common sand-whiting and the trumpeter-whiting are both very abundant, but the other two species are more rare. The sand-whiting is perhaps the fish most in demand in the metropolitan markets, where it is to be obtained all the year round.

Jew-fish.

The jew-fish is the largest edible fish found on the New South Wales coast, attaining sometimes a length of 5 feet. It is found at all seasons, but most frequently during summer. The teraglin is of the same family as the jew-fish, though it does not reach an equal size. The air bladder is large and of excellent quality, being of great value for the making of isinglass.

The mackerel is obtained in enormous quantities off the coast, and sometimes even in the harbours. It is a good fish when eaten fresh, but it decomposes rapidly.

Mullets.

The family of *Mugilidæ*, or mullets, is well represented in Australian waters. The sea mullet is a large fish, often attaining a length of 2 feet, and a weight of 8 lb. It is regarded by some authorities as unsurpassed in richness and delicacy of flavour by any fish in the world; and it visits these shores in countless numbers in the season when it is in the best condition. While young the fish keeps entirely to the creeks and lakes, where it increases in size very rapidly, but when full-grown it seeks the open waters.

Gar-fish.

There are four species of gar-fish found on the New South Wales coast. The Sydney gar-fish is very abundant, especially towards the end of summer, making its appearance in shoals, sometimes of enormous size. The river gar-fish is even of better quality than the last mentioned, but is not so plentiful as formerly. The other species are seldom met with. There are numerous other varieties of fishes found in the waters of New South Wales, many of which are very valuable as articles of food, but which are for the most part neither so numerous nor so easily obtained as those referred to.

Destructive fishes.

Destructive fishes are by no means rare; the shark family being largely represented, not only in the deep-sea, off the coast, but even in the harbours. The shark is not, however, absolutely valueless. The fins find a ready sale in the Chinese markets; the skin also has some commercial value, while from the liver is extracted a large quantity of valuable oil, equal in every respect to cod-liver oil.

Neglect of fisheries.

As already pointed out, the fisheries of New South Wales have been much neglected, and, as a further instance of this, it may be mentioned that although during the winter season immense shoals of herrings visit these coasts, no attempt is made to take and preserve them. The Rev. J. E. Tenison-Woods, Sir William Macleay, and the members of the Fisheries Commission, have strongly directed attention to the value of this fish. It is quite as abundant as the herring of Scotland, and superior in flavour; and, preserved like sardines, it would no doubt rival that delicacy. There is ample evidence that the application of a little capital, and intelligent management, would make the herring fishery a very profitable industry.

Fresh-water fish.

In Sydney the supply of fresh-water fish is very limited, although the rivers of the Colony produce some most excellent specimens. The rivers Murray, Murrumbidgee, Lachlan, and Darling are the most plentifully stocked, the Murray cod *(Oligorus Mitchelli)* being perhaps the most highly esteemed of their fishes. Another fish of the same species is the *(Oligorus Macquariensis)*, which is to be met with in the upper branches of the Clarence. Both these specimens of Murray cod have been found weighing as much as 100 lb. The silver perch and several kinds of the Percidæ family, so highly prized for their delicacy, are plentiful in the rivers. In the Richmond River the cat-fish *(Copidoglanis Tandanus)* is very common, whilst herrings and mullet are caught in almost all the eastern rivers of the Colony.

Fish acclimatization.

Little systematic attempt has yet been made to acclimatize European varieties of edible fishes, although success would most probably attend any efforts in this direction, every difficulty having been overcome in Victoria, New Zealand, and Tasmania.

Crustaceæ.

Among the Crustaceæ, which abound on the coast and in the water-courses of the interior, the lobster and several varieties of salt and fresh-water crayfish are most noticeable. The prawn (*Penolus esculentus*) is very abundant in all the shallow bays and harbours.

Oysters.

Oysters are excellent and very plentiful. The oyster-beds of Port Jackson, however, have been greatly injured, and the markets of the metropolis are supplied from Port Stephens, Broken Bay, the Clarence, and other ports on the coast. Before the appointment of the Royal Commission of Fisheries, in 1880, these molluscs were threatened with extinction in the near future; but the Government has now issued regulations for the conduct of this industry, with a view to prevent the wholesale destruction which was formerly carried on. There is but little doubt that the establishment of "parcs" like those which may be seen along the coasts of France and Belgium, where oyster culture is conducted on scientific principles, would be remunerative, as the demand for this delicacy is great and continually increasing.

Oyster culture

Remarkable fishes.

Several varieties of fishes which have long disappeared from other parts of the world are still represented in New South Wales. Amongst these are the cestracion, or Port Jackson shark, whose teeth resemble those of the fossil acrodis found in the mesozoic deposits, and the ceratodus, an existing ganoid, otherwise exclusively represented in the trias formation, its anatomy showing a connecting link between a lizard and a fish. Amongst other remarkable fishes found in these waters, several may be enumerated. The frog fish, belonging to the order Pediculati, has fins adapted for walking on the ground rather than for swimming, and is found floating in-shore amongst marine plants, from which it is with difficulty distinguished, owing to its great resemblance to them in point of colour. The hopping fish, a variety of gobii, or sea-gudgeon, has its fins developed into legs, so that the animal is able to leap along the mud flats which it frequents. The eyes of this fish are curiously placed at the top of its head, and are capable of being thrust far out of their sockets, and of moving independently of one another. The phyllopteryx, or sea-horse, so named from a resemblance in the shape of the head and fore part of the body to that of the horse, is the most remarkable fish of Australia, if not of the world. The dugong (*Halicore Australis*) was formerly met with at the mouths of the Richmond, Tweed, and Brunswick Rivers, but is now seldom seen south of the Brisbane River, in Queensland. This fish resembles the porpoise in shape and size, but has no dorsal fin. The skin is heavy and thick, and is said to make excellent leather.

The habits of this animal are those of a graminivorous ruminant, its stomach being exactly like that of an ox; it frequents the flats and shallows along the margin of the shore, and feeds upon the grass which is found thereon. Like the whale family, it suckles its young. The dugong attains a large size, sometimes measuring 14 feet long and 10 feet in girth. An animal of such dimensions would weigh about 300 lb.

Dugong.

REPTILES.

The snake and lizard families number many varieties, which are distributed over all parts of the country. These reptiles, however, have generally disappeared from the settled portions of the Colony having been deprived of the means of subsistence which the condition of the country in its natural state afforded them. Several species of snakes are venomous, particularly the death-adder, the black snake, the brown, and the tiger snake, but accidents due to snake bite are now of rare occurrence. Most reptiles retreat at the approach of man, and there is comparatively little danger to be apprehended from their presence. Lizards are common, very beautifully marked, and some species, particularly the iguanas, attain a considerable size.

Venomous snakes.

Although the rivers of the neighbouring Colony of Queensland are the abode of several species of alligators, the rivers of New South Wales are entirely free from the presence of these dangerous saurians.

PART IX.

Commerce and Shipping.

THE commerce of New South Wales is exceeded in value by that of no other colony or dependency of Great Britain, India and the Canadian dominion alone excepted. India, with a population nearly 250 times larger, has a trade hardly four times as great as this Colony, while the Dominion, whose population numbers five times that of New South Wales, barely exceeds it in the value of its commerce. Thus in the year 1887 the trade of these countries was :—

Country.	Imports.	Exports.	Total trade.
	£	£	£
India	77,799,884	94,921,983	172,721,867
Canadian Dominion	21,706,732	18,393,660	40,100,392
New South Wales	18,806,236	18,496,917	37,303,153

SHIPPING.

Early shipping records.

Prior to the year 1825 the records of the shipping trade of the Colony are very meagre; in the year mentioned, however, the shipping amounted to 85 vessels inwards, aggregating a tonnage of 24,559; and 75 vessels outwards, with a total tonnage of 22,688. Twenty-five years afterwards, just before the separation of Port Phillip, the figures stood thus: 976 vessels inwards, with a tonnage of 234,215 tons, and 1,014 vessels outwards, with a tonnage of 263,849 tons. In 1851, the year of the separation of Victoria from the parent Colony, the trade fell to 553 vessels inwards, measuring 153,002 tons, and 503 vessels outwards of 139,020 tons.

Separation of Queensland caused no decline in trade.

The separation of Queensland caused no decline in the trade of the Colony, as shown by the returns. Possibly the classing of northern boats as foreign traders, instead of as coasters, would be the cause of even an apparent increase, for in 1860, the year following the separation, the shipping amounted to 1,424 vessels inwards, with a tonnage of 427,835 tons, and 1,438 vessels outwards of 431,484 tons, a considerable advance on the figures of the previous year. From 1860 to the present time trade has rapidly increased, and at a greater ratio than the population, so that in 1888 the tonnage, inwards, amounted to 2,414,750 tons, and the outward tonnage to 2,350,669, or 4,765,419 tons in all.

Increase of shipping.

The rate of increase has been fairly constant, though checked occasionally by the occurrence of bad seasons here, or failure of prices in the European markets. The following table shows the quantity and tonnage of shipping arriving and departing from New South Wales, at intervals of five years, from the date of the earliest records to the year 1888.

Vessels Entered and Cleared in New South Wales.

Year.	Inwards.		Outwards.	
	Number.	Tonnage.	Number.	Tonnage.
1825	85	24,559	75	22,688
1830	157	31,225	147	28,822
1835	260	63,019	269	66,964
1840	709	178,958	665	163,704
1845	597	105,352	614	103,961
1850	976	234,215	1,014	263,849
1855	1,152	353,323	1,185	362,482
1860	1,424	427,835	1,438	431,484
1865	1,912	635,888	2,120	690,294
1870	1,858	689,820	2,066	771,942
1875	2,376	1,109,086	2,294	1,059,101
1880	2,108	1,242,458	2,043	1,190,321
1885	2,601	2,088,307	2,583	2,044,770
1888	2,955	2,414,750	2,972	2,350,669

Shipping of New South Wales compared with other colonies.

As already stated, the trade of New South Wales greatly exceeds that of any other colony of the Australian group. Victoria is next in order, though at a considerable distance; after which come South Australia, Queensland, and New Zealand. The total shipping of Australasia for the year 1888 amounted to 14,689,766 tons, of which 4,765,419, or about one-third, belonged to New South Wales. The amount of the shipping trade of each Colony, during each year since 1878, is shown in the following table.

Shipping of Australasian Colonies, Inwards and Outwards.

Colony.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	2,459,504	2,540,724	2,432,779	2,786,500	3,296,665	4,006,237	4,660,958	4,133,077	4,258,604	4,322,758	4,765,419
Victoria	1,913,427	1,940,222	2,179,899	2,411,902	2,690,884	2,964,331	3,151,587	3,260,158	3,735,387	3,858,243	4,307,883
South Australia	906,273	932,891	1,200,904	1,269,491	1,337,218	1,504,765	1,834,532	1,807,042	1,558,476	1,677,883	1,973,651
Queensland	1,066,758	1,256,394	1,255,576	1,553,808	1,880,591	882,491	1,152,112	1,029,181	1,120,479	924,232	996,229
Western Australia	162,753	170,037	250,429	285,046	344,247	389,102	442,886	468,035	497,506	464,637	812,393
Tasmania	315,854	381,895	413,303	383,762	417,418	471,122	614,198	677,806	692,429	735,299	776,278
New Zealand	884,983	949,692	819,716	833,621	899,836	1,002,491	1,063,430	1,032,700	990,953	983,337	1,057,913
Total	7,709,552	8,171,855	8,552,606	9,524,130	10,866,859	11,220,539	12,919,703	12,407,999	12,853,836	12,966,389	14,689,766

Previous to 1883, in the Queensland returns, vessels were entered for every port in the Colony at which they call.

Trade of Colony in British hands

The trade of the Colony is, to a very large extent, in British hands, though there has been a noticeable increase in foreign shipping since 1881. In 1872 the British shipping entered and cleared amounted to 1,400,672 tons, while in 1888 it was 4,141,551 tons, showing an increase during sixteen years of 2,740,879 tons. The foreign shipping amounted to 187,368 tons in 1872, and 623,868 in 1888, being an increase of 436,500 tons.

French and German mail steamers.

The advent of the French line of Messageries Maritimes, and of the German Lloyd's steamships, has tended to increase the amount of the foreign trade of the Colony; but notwithstanding this, the tonnage under the British flag was in 1888 not less than 87 per cent. of the whole. The annexed table shows the respective amounts of each class since 1872.

British and Foreign Vessels Entered and Cleared in New South Wales.

Year	British.	Foreign.	Total.
	Tons.	Tons.	Tons.
1872	1,400,672	187,368	1,588,040
1873	1,619,019	143,459	1,762,478
1874	1,820,146	170,748	1,990,894
1875	2,001,641	166,546	2,168,187
1876	1,969,457	158,268	2,127,725
1877	2,022,728	215,253	2,237,981
1878	2,203,491	256,012	2,459,504
1879	2,292,733	247,991	2,540,724
1880	2,259,924	172,855	2,432,779
1881	2,563,999	222,501	2,786,500
1882	2,977,756	318,909	3,296,665
1883	3,532,955	473,282	4,006,237
1884	4,185,549	475,409	4,660,958
1885	3.615,582	517,495	4,133,077
1886	3,746,725	511,879	4,258,604
1887	3,836,527	486,231	4,322,758
1888	4,141,551	623,868	4,765,419

Larger portion of tonnage owned in colonies.

Of the total tonnage set down as British, the larger portion is owned in the colonies. In 1876 out of 1,969,457 tons of shipping entered and cleared under the British flag, 1,293,813 tons, or 66 per cent., were Australian; in 1881, out of 2,563,999 tons entered and cleared, 1,543,431 tons, or 60 per cent., represented colonial shipping; while in 1888 the colonial shipping amounted to 2,424,002 tons, out of a total of 4,141,551 tons, or 58 per cent.

British shipping.

The amount of British and British-colonial shipping entered and cleared from New South Wales ports during each year since 1876 is shown below.

Tonnage of British Vessels trading to New South Wales.

Year.	Shipping belonging to Great Britain.	Shipping belonging to British possessions.	Total, inwards and outwards.
	Tons.	Tons.	Tons.
1876	675,644	1,293,813	1,969,457
1877	690,348	1,332,380	2,022,728
1878	816,255	1,387,236	2,203,491
1879	810,815	1,481,918	2,292,733
1880	760,688	1,499,236	2,259,924
1881	1,020,568	1,543,431	2,563,999
1882	1,301,347	1,676,409	2,977,756
1883	1,429,725	2,103,230	3,532,955
1884	1,716,255	2,469,294	4,185,549
1885	1,520,091	2,095,491	3,615,582
1886	1,503,921	2,242,804	3,746,725
1887	1,599,191	2,237,336	3,836,527
1888	1,717,549	2,424,002	4,141,551

Tonnage of foreign vessels.

Compared with the figures just given, the tonnage of the foreign vessels trading with New South Wales will appear very small. Taking the year 1888, for which the inward and outward tonnage for the principal nationalities are given below, America stands first, then France, whose importance in the shipping trade of the colony dates from 1883. After France comes Germany. The quantity of American shipping visiting the ports of New South Wales has increased very little since 1876, though at one time it threatened to be a formidable rival of Great Britain for the carrying trade of the Colony. Scandinavia is the only other nation whose carrying trade with the Colony is important.

Foreign vessels Entered and Cleared in New South Wales during 1888 :—

	Tonnage.
U.S. America	173,331
France	167,797
Germany	159,899
Norway and Sweden	79,846
Chili	11,646
Other nations	31,349
Total	623,868

Steam and sailing tonnage.

The records prior to the year 1876 do not distinguish the steam from the sailing vessels, but the modern tendency to supersede sailing vessels by steam is abundantly apparent even in the twelve years which have since elapsed. In 1876 the steam tonnage was 912,554 as compared with 1,215,171 tons of sailing vessels, being 57 per cent. of sailing, and 43 per cent. of steam tonnage ; in 1888, the relative positions were altogether changed, for the tonnage of sailing vessels had slightly decreased, being only 1,500,910 tons, or 31 per cent., as against 3,264,509 tons of steam, or 69 per cent. of the whole shipping. The net increase of steam tonnage for the twelve years has therefore been rather more than 257 per cent. The tonnage of each class since 1877 was as under :—

Steam and Sailing Vessels Entered and Cleared.

Year.	Steam.	Sailing.	Year.	Steam.	Sailing.
	Tons.	Tons.		Tons.	Tons.
1877	1,007,679	1,230,302	1883	2,702,196	1,304,041
1878	1,105,200	1,354,304	1884	3,373,710	1,287,248
1879	1,231,423	1,309,301	1885	2,791,843	1,341,234
1880	1,550,372	882,407	1886	2,982,122	1,276,482
1881	1,758,304	1,028,196	1887	3,145,548	1,177,210
1882	1,996,663	1,300,002	1888	3,264,509	1,500,910

Tonnage arriving in ballast.

The advantage offered by the New South Wales trade to shipowners is illustrated by the large amount of tonnage coming to the Colony in ballast, and the small amount leaving without cargo. A large proportion of the vessels arriving in ballast come from the ports of the neighbouring colonies, having delivered a general cargo there, and, being unable to obtain return freight, go to Newcastle for a cargo of coal. The largest amount of tonnage in any one year since 1876 entered in ballast was in 1888, when it reached 628,732 tons, and the largest cleared was 60,457 tons in the year 1884. The tonnage entered and cleared for each year is given below.

Tonnage Entered and Cleared in Ballast.

Year.	Entered	Cleared.	Year.	Entered.	Cleared.
	Tons.	Tons.		Tons.	Tons.
1877	295,569	8,393	1883	384,645	27,855
1878	354,917	13,115	1884	395,990	60,457
1879	337,696	19,892	1885	345,366	53,381
1880	217,763	16,219	1886	353,969	40,635
1881	271,343	5,179	1887	507,177	36,434
1882	325,480	23,338	1888	628,732	41,735

Value of imports per ton high.

Notwithstanding the fact that from one-fourth to one-sixth of the tonnage arriving in the Colony is in ballast, as against one-sixtieth of the clearances, the average value of freights inward is higher than of those outward. Thus in 1888 the average value of the cargoes imported was £7 10s. 8d. per ton of vessels inward, or, if an allowance be made for ships in ballast, the value per ton was £10 3s. 9d. The mean value of goods exported per ton of shipping outward was £6 10s. 8d., and allowing for vessels leaving in ballast, £6 13s.; in the former case 13·27 per cent. lower, and in the latter 34·71 per cent. than the value of tonnage imported.

Value of exports per ton.

New South Wales exports have, generally speaking, a high value per ton, and the lower value of the exports per ton than the imports is due to the large amount of coal exported, the quantity for 1888 being 1,923,872 tons weight, or 800,000 tons measurement, out of a total of 2,350,669 tons. The value of the exports of the Colony per ton exceeds that of the imports in the case of Great Britain alone. In every other case, as will be seen from the following statement, the import value per ton is much higher than the export.

Value per Ton Measurement of Imports and Exports of New South Wales.

Country.	Value of imports per ton.			Value of exports per ton.		
	£	s.	d.	£	s.	d.
Britain	20	17	4	31	19	2
ia	3	8	0	2	4	1
Australia	4	18	6	2	6	8
nia	13	3	2	2	15	0
ealand	6	9	2	2	11	2
land	11	8	8	7	9	5
British possessions	5	9	5	3	0	7
States	11	5	8	2	17	2
Foreign countries	7	7	9	4	4	9

Trade with var ous countries compared.

ving regard merely to the tonnage, the trade of the Colony Victoria is larger than with any other country, Great in not excepted, though it will be presently seen that in t to value the latter country stands first. After Victoria and Britain come Queensland, New Zealand, South Australia, asmania, in the order named. Of foreign countries, the d States stand first, France and her dependencies being the important of the other countries. The tonnage of vessels ing cargoes arriving from Great Britain during 1888 amounted ly 24·71 per cent. of the total imports, though the value of t carried amounted to not less than 50·65 per cent. The ge arriving from the various Australian Colonies was per cent. of the whole, with a value, however, of only 33·23 ent. From the other possessions of Great Britain there was port tonnage equal to 7·54 per cent., valued at 4·05 per cent. total imports. The United States and other foreign countries a little more than 14·14 per cent. of the tonnage inward, d at 12·06 per cent.

Tonnage of exports to Great Britain.

the tonnage of New South Wales exports, Great Britain only 11·48 per cent., though in value the exports were 55·18 ent. of the total. The exports by sea to Victoria and the Australasian Colonies amounted to 52·47 per cent. of the

Value of British commerce.

whole, while in value they reached only 26·26 per cent. As regards the other British possessions, the tonnage of vessels carrying goods from New South Wales to their ports amounted to 6·22 per cent. of the whole, but the value reached only 2·84 per cent. Similarly with the United States and other foreign countries, though the tonnage reached 15·81 and 13·99 per cent., the value was but 6·80 and 8·90 per cent. respectively. The following table shows the tonnage inward and outward from Great Britain and the Colonies, and to the United States, as well as the value of the cargoes; but it must be borne in mind that the tonnage figures represent the nominal tonnage of the vessels carrying the goods, and not the actual weight of the goods themselves, which latter information it is impossible to obtain.

Tonnage of Vessels and Value of Cargoes during 1888.

Country.	Inwards.				Outwards.			
	Tonnage.		Value.		Tonnage.		Value.	
	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.
Great Britain ..	441,464	24·71	£ 9,212,981	50·65	265,246	11·48	£ 8,476,669	55·18
Victoria........	431,406	24·15	1,467,124	8·06	647,096	28·02	1,425,847	9·28
South Australia	137,404	7·69	676,512	3·71	129,208	5·59	301,644	1·96
Tasmania	39,166	2·19	515,378	2·83	40,419	1·75	111,239	0·72
New Zealand ..	122,002	6·83	788,003	4·33	153,633	6·65	393,288	2·56
Queensland	227,272	12·72	2,598,014	14·28	241,377	10·45	1,803,438	11·74
Other British possessions.	134,651	7·54	736,750	4·05	145,098	6·22	436,692	2·84
United States ..	85,738	4·80	967,528	5·32	365,191	15·81	1,044,144	6·80
Other foreign countries.	166,915	9·34	1,226,977	6·74	321,666	13·99	1,367,488	8·90
Total	1,786,018	100·00	18,189,267	100·00	2,308,934	100·00	15,360,449	100·00

Average tonnage of vessels trading with N. S. Wales.

The average tonnage of vessels trading with the Colony has gradually increased since 1845; previously to that year transports formed so large a portion of the total tonnage as to swell the average considerably. The average tonnage per ship at each decennial period since 1825 was as follows :—

Year.	Average tonnage of vessels.
1825	295
1835	246
1845	173
1855	306
1865	329
1875	463
1885	797
1888	817

Tonnage of British, Foreign, and Colonial vessels.

The tonnage for the years since 1877 has been separated into British, Foreign, and Colonial, and the average for each year will be found below. It will be seen that during this period the average tonnage of British vessels trading here has increased 72 per cent., and foreign vessels 73 per cent., and Colonial about 53 per cent.

Year.	Average tonnage of vessels.			Year.	Average tonnage of vessels.		
	British.	Foreign.	Colonial.		British.	Foreign.	Colonial.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1877	881	689	376	1883	1,060	982	594
1878	796	706	406	1884	1,146	973	611
1879	805	701	433	1885	1,312	997	602
1880	1,031	732	476	1886	1,329	986	600
1881	1,105	780	498	1887	1,385	1,108	549
1882	1,067	787	533	1888	1,516	1,194	576

Decrease in hands required per ton.

The natural corollary to the increase in the size of ships is the decrease in the number of hands required per ton, though the actual number of hands employed per vessel has increased. Intercolonial vessels carry an average of 23 men to every vessel, or

Average crews carried.

1 man to every 25 tons. British vessels carried in 1888 an average complement of 45 men, or 1 man to every 33·7 tons, while foreign ships carried an average crew of 44 men, or 1 man to every 27 tons. In 1876 British ships carried 1 man to every 25 tons, intercolonial vessels 1 man to every 22½ tons, and foreign vessels 1 man to 35 tons, the decrease in the tonnage per sailor in foreign vessels being due to the finer class of ships that began to trade here in 1883, which are fitted in the most modern fashion, and manned accordingly.

Year.	Average crews of vessels.			Year.	Average crews of vessels.		
	British.	Foreign.	Colonial.		British.	Foreign.	Colonial.
1877	33	21	18	1883	37	38	24
1878	28	20	18	1884	41	36	25
1879	30	23	19	1885	44	36	24
1880	44	25	21	1886	45	39	23
1881	40	23	22	1887	48	49	22
1882	35	18	22	1888	45	44	23

Comparison of Australian ports.

The relative importance of the various ports of Australia may be ascertained by an inspection of the following table, from which the rank of Sydney becomes evident. Melbourne takes the first place; but, as hereafter pointed out, its trade, for purposes of comparison, should be reduced by a large tonnage, representing the larger ocean steamers, whose terminal port is Sydney, making it merely a port of call. Newcastle comes next after Sydney, exceeding in tonnage even Port Adelaide and Brisbane. It should be noted in respect to Queensland ports, that the tonnage of vessels is recorded at every port of call, and on this account the towns north of Brisbane also appear more important than they really are.

Tonnage Entered and Cleared at principal Australasian Ports.

Port.	Entered.	Cleared.
	Tons.	Tons.
Sydney	1,692,268	1,424,429
Newcastle	633,119	815,516
Melbourne	2,015,876	2,007,694
Brisbane	410,358	398,910
Rockhampton	231,828	214,447
Townsville	207,963	200,794
Auckland	169,301	137,894
Wellington	103,667	112,342
Hobart	207,386	198,395
Launceston	95,796	101,507
Port Adelaide	770,846	755,864
Glenelg	32,289	32,289

Increase of Sydney trade.

The progress of the shipping trade of Sydney has been very uniform, increasing at an average rate of 8 per cent. per annum. The vessels registered as entering the port of Sydney, as a rule, considerably exceed in tonnage those clearing. To account for this difference it is only necessary to state that vessels leaving Sydney for Newcastle for the purpose of shipping coal are reckoned as departures from Newcastle, and not from Sydney. For this reason the clearances of Newcastle uniformly exceed the arrivals, as will be noticed in the subsequent table. The practice of clearing vessels at both ports at one time obtained, but has been abandoned for some years, and vessels are now cleared at the port which they last leave.

Tonnage of Vessels Entered and Cleared at Sydney and Newcastle.

Year.	Sydney.		Newcastle.	
	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.
1871	409,063	394,289	277,959	376,378
1872	418,164	360,735	342,514	427,845
1873	474,203	367,351	389,121	498,468
1874	499,326	422,693	510,291	543,693
1875	590,700	468,423	510,902	573,626
1876	635,269	502,866	433,423	535,738
1877	662,217	511,623	469,349	577,676
1878	712,303	511,801	542,745	665,885
1879	759,980	581,694	492,163	651,501
1880	827,738	641,996	400,598	516,480
1881	955,531	655,161	481,695	645,543
1882	1,101,756	844,677	559,228	737,772
1883	1,260,595	1,115,411	656,916	926,956
1884	1,554,118	1,277,843	708,449	1,066,462
1885	1,608,169	1,283,888	452,946	722,865
1886	1,638,802	1,399,545	416,518	686,179
1887	1,483,045	1,303,488	566,702	780,588
1888	1,692,268	1,424,429	633,119	815,516

Trade of Sydney compared with British ports.

The comparative importance of the trade of Sydney may be seen from viewing it in connection with the trade of the chief cities of Great Britain. It will be observed that in absolute tonnage Sydney was surpassed by five English ports—London, Liverpool, Cardiff, Newcastle, and Hull; though in point of value, the trade of Sydney exceeded that of any port in Great Britain, London, Liverpool, and Hull excepted. Thirteen of the most important ports of Great Britain are shown in the following table. The figures are for 1887 for British ports, and for 1888 for Sydney.

Tonnage of principal Ports of Great Britain and of Sydney.

Port.	Inwards.	Outwards.
	Tons.	Tons.
London	6,880,187	5,284,149
Liverpool	5,186,393	4,758,525
Cardiff	2,536,129	4,714,247
Newcastle (England)	1,592,166	2,803,236
Hull	1,816,296	1,535,238
Sydney	1,692,268	1,424,429
Glasgow	977,032	1,464,326
Newport	950,743	1,482,436
Sunderland	748,182	1,000,278
Southampton	809,162	749,739
Dover	698,171	675,948
Middlesbrough	729,714	564,253
Swansea	532,899	746,459
Bristol	540,944	222,946

Sydney chief shipping port

Sydney is not only the metropolis, but the chief shipping port of the Colony, its trade being larger than that of any city in the southern hemisphere. The nominal trade of Melbourne appears larger, but as that city is a place of call for various lines of steamers, whose terminal port, and the destination of the greater part of whose cargo, is Sydney, the shipping trade of Melbourne is unduly swollen, and its relative importance compared with Sydney appears greater than really is the case. Newcastle ranks second amongst New South Wales ports, and for many years previous to 1880 its trade was greater than that of even Sydney itself. Since the year named, however, the tonnage both entered and cleared at Sydney has exceeded that of Newcastle. No other seaport can be compared with either of these ports, though for some time Wollongong has maintained a considerable trade, especially in coal; and of late years the importance of Eden, Twofold Bay, has steadily increased.

Murray and Darling trade.

The statistics of the trade of the Murray and Darling River ports were available for the first time in 1886, during which year the foreign trade was by no means inconsiderable. During 1887 the rivers were very favourable for navigation, and the returns consequently show a considerable advance, but the year 1888

Riverine trade.

on the contrary shows a decline. The figures relating to Wentworth for the most part represent Darling trade, while the others refer to the Murray River; and the tonnage has been credited to the first port of call for vessels inward, and to the last port for vessels outward, bound.

Trade at Riverine ports.

Port.	1887.		1888.	
	Inwards.	Outwards.	Inwards.	Outwards.
	Tons.	Tons.	Tons.	Tons.
Wentworth	35,392	35,392	22,427	21,929
Moama	30,328	356	28,339	300
Tocumwal and Swan Hill	142	17,030	*	15,286
Total	65,862	52,778	50,766	37,515

* Included in Moama.

Number of vessels registered.

During the year 1888, 1,012 steamers and sailing vessels, representing 113,593 tons net, stood registered in the books of the Custom House, as belonging to the port of Sydney. Of these 438 were steamers, collectively of 48,250 tons net and of 17,474 nominal horse-power. There were 69 sailing vessels registered at Newcastle (10,896 tons net), and 53 steamers of 2,837 nominal horse-power, and 4,774 net tons. The total tonnage registered in the Colony was 129,263, of which 53,024 was steam tonnage, with 20,311 nominal horse-power.

Value of tonnage registered in New South Wales.

Part of the tonnage registered is that of vessels built in the Colony. The remainder may be fairly taken as a direct addition to the colonial fleet, and classed among the imports of the Colony. The value of this import may be gathered from the figures given below. In estimating the value of the vessels imported, approximate figures can alone be given. The value per ton of the British mercantile fleet averages about £30 for steamers and £15 for sailing vessels, but in this Colony the figures would be somewhat lower, and for the purpose of the estimate which follows, the average value of steam tonnage has been taken at £25, and sailing vessels at £12 10s.

Foreign Tonnage Registered in New South Wales.

Year.	Sailing.	Steam.	Value.	Year.	Sailing.	Steam.	Value.
	Tons.	Tons.	£		Tons.	Tons.	£
1877	4,469	2,616	121,262	1883	8,681	4,038	209,462
1878	5,329	3,732	159,912	1884	8,332	6,339	262,625
1879	4,332	2,764	123,250	1885	4,076	3,395	135,825
1880	5,065	1,298	95,762	1886	4,630	852	79,175
1881	9,558	1,948	168,175	1887	8,502	9,525	356,900
1882	12,788	4,488	272,050	1888	4,797	1,963	109,137

Import of vessels.

No reliable data have as yet been procurable as to the number and tonnage of vessels built abroad for the New South Wales local trade, but that number must be considerable, and forms an import of large value altogether lost sight of in the Customs returns. Some idea, however, of the large number of vessels imported may be gathered from the tonnage registered, which will be found in the preceding table. The total tonnage registered was:

Vessels Registered in New South Wales.

Year.	Sailing vessels.			Steamers.			Total.	Total tons.	Total men.
	No.	Tons.	Men.	No.	Tons.	Men.			
1876	64	9,523	377	31	2,997	193	95	12,520	570
1877	67	6,464	333	36	5,131	262	103	11,595	595
1878	55	7,111	319	41	5,392	278	96	12,503	597
1879	54	5,870	281	36	3,561	291	90	9,431	572
1880	54	7,003	325	20	2,159	168	74	9,162	493
1881	51	10,300	328	23	2,713	115	74	13,013	443
1882	87	14,246	511	41	7,764	509	128	22,010	1,020
1883	83	10,566	420	72	9,406	575	155	19,972	995
1884	77	10,850	507	84	11,484	707	161	22,334	1,214
1885	49	4,876	280	50	6,387	394	99	11,263	674
1886	45	5,969	166	47	3,489	235	92	9,458	401
1887	39	9,138	258	36	10,303	603	75	19,441	861
1888	25	5,101	164	25	2,357	237	50	7,458	401

Shipbuilding record.

The building of steam vessels has become of more importance than that of sailing ships, the tonnage during the last seven years being respectively, 20,590 of steam tonnage, and 8,940 tons of sailing. Schooners and ketches are the principal classes of sailing vessels built in the Colony, the general tonnage of each class averaging somewhat under 100 tons burden. The general tendency to supplant sailing vessels by steamers, and the substitution of iron for wood for the frames and hulls of vessels, have given a check to the wooden ship-building industry, which at one time promised to grow to important dimensions. Every kind of timber suitable for the construction of ships is found on the rivers of the coast districts of the Colony, but, as the demand for this description of vessel has not increased, little advantage can be taken of our resources in this respect.

Tendency to supplant sail by steam.

Vessels built in the Colony.

The years 1883 and 1884 were marked by great activity in the construction both of sailing and steam vessels, 50 sailing and 52 steam vessels, valued at about £157,762, having been built in 1883, whilst 39 sailing vessels and 64 steamers, valued at £160,100, were built in the subsequent year. Trade has not been so active since, and the industry would appear to be fast dying out, as in 1888 it had fallen lower than in any of the years shown in the following table, the value of sailing vessels built being only £3,800, and of steamers £9,850, in all £13,650. The number of vessels built during each year since 1876 is given below.

Vessels Built in New South Wales.

Year.	Sailing vessels.		Steamers.		Total vessels.	Total tonnage.
	No.	Tons.	No.	Tons.		
1876	38	2,066	22	1,399	60	3,465
1877	34	1,995	27	2,515	61	4,510
1878	23	1,782	26	1,660	49	3,442
1879	31	1,538	19	797	50	2,335
1880	29	1,938	12	861	41	2,799
1881	14	742	15	765	29	1,507
1882	41	1,458	24	3,276	65	4,734
1883	50	1,885	52	5,368	102	7,253
1884	39	2,518	64	5,145	103	7,663
1885	29	800	36	2,992	65	3,792
1886	27	1,339	40	2,637	67	3,976
1887	14	636	16	778	30	1,414
1888	9	304	11	394	20	698

Dock accommodation in Sydney.

The accommodation provided both by the Government and by private enterprise for the fitting and repairing of ships, is equal to the requirements of the trade of the Colony. At Sydney there are three graving docks, four floating docks, and five patent slips. At Newcastle there is one patent slip, and on the Clarence River a floating dock, besides which there are other docking and building yards in different parts of the Colony for the convenience of coasters and small craft. The principal docks and slips in Sydney, as well as their leading dimensions and size of vessel they will carry, are shown in the following table.

Docks and Slips in Sydney Harbour.

Name of Dock.	Where situated.	Length of Keel.	Breadth	Draught of vessel taken.	Lifting power of patent slip or dock.
Graving docks—		ft.	ft.	ft. in.	tons.
Fitzroy (Government)..	Cockatoo Island ...	475	59	20 0	...
Biloela ,, ...	,, ...	635	84	32 0	...
Mort's	Balmain	410	68	20 0	...
Floating docks—					
Anderson's	Johnston's Bay ...	100	23	7 0	150
Anderson and Goodall	,, ...	320	57	27 0	1,400
Rountree's	Waterview Bay ...	164	42	12 0	600
Atlas Company's*	Woolwich	300	73	25 0	2,000
Patent slips—					
Bayle's	Balmain	...	...	...	..
Davy and Sands'.........	Pyrmont	180	...	...	600
Mort's No. 1	Balmain	250	...	...	1,500
,, ,, 2	,, ...	200	...	...	1,000
,, ,, 3	,, ...	...	...	...	40

* Pontoon Depositing Dock.

New graving dock.

All the necessary tools and appliances for the repairing of ships are found in the dockyards. The new graving dock now being completed by the Government will be the largest single dock in the world, and capable of receiving vessels drawing 32 feet of water. For natural facilities for shipping Sydney stands unrivalled. The water deepens abruptly from the shores, so that the largest vessels may be berthed alongside the wharves and quays. The

Wharfage, Sydney.

wharfage is chiefly in private hands, and powerful shipping appliances and roomy stores are found at all the important wharves. The Government still holds the shores of Sydney Cove, along the margin of which magnificent echelon wharves have been constructed. The south and west sides of Darling Harbour also belong to the Government, and two jetties capable of accommodating the largest ships are in course of construction, communicating directly with the railway, which has been carried to the water's edge. The total wharf frontage amounts to about 6 miles.

Equipment of the Port of Newcastle.

Newcastle is also a well-equipped port, where vessels of 4,000 tons can be safely berthed; and every modern steam and hydraulic appliance for loading coal is found on its wharves. The Government owns nearly all the wharfage, which extends over a length of about 10,500 feet. The Government shipping appliances include seven steam cranes of 15 tons, and twelve hydraulic cranes, two of 25 tons, six of 15 tons, and four of 9 tons, as well as a number of shoots. There are also two slips owned by private individuals, capable of taking up vessels of 300 and 1,200 tons respectively. Staiths, cranes, and other coal-shipping appliances have been erected at Wollongong, Bulli, Coal Cliff, and other ports. Private as well as Government wharves are found at all the chief centres of population along the rivers of the Colony, and all ports with a trade of any importance have their jetties and shipping facilities.

Private wharves.

Vessels wrecked during 1888.

The coast of New South Wales is free from any source of danger to vessels navigating it, and where reasonable precautions were taken wrecks have been very rare. The majority of losses have been amongst vessels under 100 tons burthen. The number of wrecks and loss of life and property during 1886 was very high, amounting to twenty-three vessels, with a total tonnage of 5,401, valued at £419,180, including cargo, and involving a considerable loss of life. This, perhaps, was the most disastrous record ever experienced in the New South Wales seas.

Vessels lost since 1880.

During 1888 the largest vessel wrecked was the ship "Berbice" of 717 tons with a cargo of flour. She missed stays when attempting to enter Newcastle Harbour and went ashore on the beach to the northward of that port. There were in all fifteen vessels lost, having a tonnage of 2,573 tons and of the estimated value with their cargo of £47,360. Eight persons also lost their lives. The following statement shows the number of vessels registered in various ports of Australia, Tasmania, and New Zealand, which were lost on the coast of New South Wales during the years 1880–88.

Vessels Wrecked off New South Wales.

Year.	Under 50 tons.	50 to 100.	100 to 200.	200 to 300.	300 to 400.	400 to 500.	Over 500 tons.	Total.	Lives lost.
1880	7	2	3	...	...	...	2	14	*
1881	6	1	1	3	1	...	1	13	*
1882	5	4	2	1	1	1	1	15	*
1883	2	6	3	1	...	...	...	12	*
1884	6	3	1	...	...	...	1	11	*
1885	3	4	1	1	1	...	1	11	*
1886	6	5	7	1	1	...	3	23	111
1887	4	5	2	1	...	...	1	13	2
1888	6	2	3	1	1	1	1	15	8

* Not ascertained.

IMPORTS AND EXPORTS.

Exports an index of production.

The value of goods imported into, and exported from, New South Wales, has increased during the sixty-three years over which the records extend, from £400,000 in 1825 to £41,745,272 in 1888. The yearly values have been somewhat uncertain in their increase, the imports from 1840 to 1852 being especially erratic; but of late years the progress of the Colony, as evidenced by its trade, has been remarkably steady. The gross value from year to year of the exports, for the reasons hereafter pointed out, forms the surest index of the progress of a country circumstanced like New South Wales, and the result of a rise or fall in the value of the staple commodities, or of a depression in production, may be readily traced in the corresponding rise or fall in the export values. The amount of the trade of the Colony, in decennial periods since 1825, is given below.

Imports and Exports of New South Wales.

Year.	Imports.	Exports.	Total Trade.
	£	£	£
1825	300,000	100,000	400,000
1835	1,114,805	682,193	1,796,998
1845	1,233,854	1,555,986	2,789,840
1855	4,668,519	2,884,130	7,552,649
1865	10,635,507	9,563,818	20,199,325
1875	13,735,133	13,797,397	27,532,530
1885	23,737,461	16,750,107	40,487,568
1888	20,885,557	20,859,715	41,745,272

Imports exceed exports.

Influence of loan expenditure on imports.

The imports have, for many years, invariably exceeded the exports. This circumstance is mainly due to the importation of loan money for the development of the natural resources of the country. The extent of this importation, as well as the excess of the imports during each of the last twelve years, is shown in the following table, but the whole question will be found dealt with in the chapter on Finance and Public Wealth.

Excess of Imports compared with Loan expenditure.

Year.	Excess of imports over exports.	Amount expended from loans during the year.
	£	£
1877	1,394,878	995,454
1878	1,970,240	816,317
1879	1,371,895	1,271,705
1880	*1,506,739	1,668,619
1881	1,279,207	2,397,368
1882	3,790,544	2,832,759
1883	1,260,568	3,265,711
1884	4,583,626	3,674,707
1885	6,987,354	3,896,145
1886	5,417,335	3,766,356
1887	309,319	1,979,504
1888	25,842	2,478,406
Total for 12 years...	26,884,789	29,043,051

* Excess of exports.

IMPORTS.

Increase in value of imports.

During 1888 the gross value of goods imported into the Colony amounted to £20,885,557, or at the rate of £19 12s. 6d. per head; the imports for home consumption were valued at £17,315,329, or £16 5s. 5d. per head of the mean population during the year, thus showing an increase on the previous year of £1 4s. 8d. per head of gross imports, and 16s. 9d. per head of net imports. As the imports, generally speaking, represent the money return or value in kind of the exports of the previous season, the increase is due to an advance in the value of the exports of 1887. The value of the imports, distinguishing the amount required for home consumption, is given in the annexed table for the eighteen years 1871–1888.

Value of Imports per Inhabitant.

Year.	Imports for home consumption.	Total imports per head.	Year.	Imports for home consumption.	Total imports per head.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1871	17 10 6	21 10 3	1880	15 12 2	19 10 7
1872	13 12 2	18 3 5	1881	18 19 9	23 2 8
1873	15 12 10	20 2 7	1882	22 2 0	27 0 3
1874	17 15 9	21 12 8	1883	21 5 11	25 15 11
1875	19 14 10	23 9 11	1884	22 2 11	26 5 11
1876	19 0 11	22 16 9	1885	21 13 1	25 10 0
1877	19 15 5	23 12 4	1886	18 13 4	21 7 10
1878	19 10 11	22 19 3	1887	15 8 8	18 7 10
1879	17 3 1	21 0 0	1888	16 5 5	19 12 6

Classification of imports.

For the purpose of more readily understanding the nature of the imports they have been classified under certain leading heads, and during 1888 the value of each class of imports was—

Nature of Principal Imports.	Total Imports.	Imported for home consumption.
	£	£
Food and beverages, including breadstuffs	3,722,029	3,224,582
Wines, fermented and spirituous liquors	955,847	818,942
Live stock...............................	773,388	704,596
Animal and vegetable products, including wool	1,860,752	1,333,272
Clothing and textile fabrics......................	4,927,224	4,426,668
Minerals and metals, raw or partly worked up...	1,048,276	614,166
Coal	68,182	68,182
Specie and precious metals	1,964,171	1,555,502
Articles of education, art, amusement	1,270,886	1,002,075
Manufactured articles not elsewhere included..	4,236,905	3,565,557
Articles, unclassified by Customs	57,897	1,844
Total value .... £	20,885,557	17,315,329

Rate of imports per head.

During 1888, therefore, the Colony imported food and drink to the value of £4,043,524, or at the rate of £3 16s. for each inhabitant, and manufactured goods to the amount of £8,994,243, or at the rate of £8 9s. per head, both together representing £12 5s. per head, out of a total of £16 5s. 5d. The two principal items of the balance are animal and vegetable products, specie and precious metals. Of the animal and vegetable products, as also of the precious metals, a large portion is worked up in the Colony for its own consumption, but the greater portion of the gold imported is treated at the Mint, and re-exported in the shape of coin. The value per head of some of the principal articles imported is given on following page.

Value of Imports per Head of the Principal Articles imported for Home Consumption.

Articles.	1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.	
	s.	d.	s.	d.	s.	d.	s	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Agricultural implements	1	3	1	3	0	9	1	1	1	8	2	6	1	9	1	3	1	0	1	10	1	2
*Apparel—wearing	17	7	12	3	7	0	8	0	8	5	7	4	18	4	19	7	25	2	21	3	23	8
Beer	5	4	6	5	4	3	4	0	5	3	6	3	6	9	7	8	7	11	6	7	6	7
Butter	0	7	0	2	0	2	0	9	2	1	1	11	3	1	2	2	3	0	0	7	1	9
Candles	2	0	1	10	0	8	1	10	3	0	1	6	3	8	3	2	1	6	0	11	1	8
Drapery	72	4	62	6	60	8	78	6	91	6	82	10	63	2	64	4	52	4	38	10	46	9
Earthenware and glassware	3	0	3	8	2	8	3	4	4	3	4	0	4	8	5	2	3	5	1	10	2	7
Fish—salt, dried, & preserved	6	6	1	9	1	3	2	11	2	7	3	6	3	4	1	10	1	6	1	4	1	7
Flour	11	1	8	3	9	6	5	0	11	2	7	6	8	4	9	8	12	0	9	8	9	2
Fruit	3	6	2	7	3	4	5	0	4	8	4	11	5	11	5	3	5	4	4	9	4	10
Furniture	3	9	2	9	1	8	3	4	4	9	5	2	4	1	4	1	5	1	3	0	2	9
Grain and pulse	7	7	4	7	4	3	3	4	9	9	4	9	9	1	7	5	8	11	5	8	7	8
Hardware	11	6	11	11	7	11	11	9	15	6	15	8	13	3	11	5	10	11	6	5	4	1
Hay and chaff	0	4	0	7	1	7	1	9	3	9	2	11	3	9	2	0	4	4	2	0	4	1
Iron and steel	18	7	13	2	13	11	13	8	22	10	18	7	18	11	24	0	15	6	14	11	17	8
Boots and shoes	7	8	10	3	8	5	9	5	12	11	11	3	10	3	11	7	10	3	8	10	9	1
Liquors—spirituous	10	11	12	0	10	0	12	2	11	8	10	7	12	0	10	4	8	9	7	0	6	11
Machinery	5	2	5	10	3	9	5	9	7	11	9	11	10	6	8	9	5	7	5	8	5	6
Potatoes	3	3	2	0	2	6	2	6	4	9	3	8	4	10	4	3	4	9	2	11	3	0
Saddlery and harness	1	6	1	7	1	4	1	6	1	11	2	0	1	6	1	2	1	0	1	4	1	0
Stationery, paper, books, &c.	11	0	9	11	8	4	11	1	11	6	9	7	11	3	11	6	10	2	8	0	8	9
Sugar	21	0	23	4	13	11	17	7	21	2	17	10	19	5	10	9	7	6	7	3	7	11
Tea	8	11	11	9	11	0	13	2	10	4	6	8	11	3	8	8	5	8	6	11	7	1
Timber	5	9	6	6	5	0	5	11	11	5	10	6	9	6	11	0	9	3	7	0	9	3
Tobacco	5	5	1	4	1	1	2	8	3	0	3	2	2	6	2	4	3	3	2	6	2	8
Toys and fancy goods	2	1	2	0	0	10	1	6	2	11	3	0	2	8	2	6	0	9	1	7	2	3
Wine	2	9	2	4	0	11	2	0	1	10	2	11	2	5	2	6	1	11	1	7	1	9

* The imports of Apparel should be taken in connection with the imports of Drapery.

Drapery and apparel.

The import of drapery stands first in the list of values, and if wearing apparel be added to it the value of these goods would represent a sum of £3 10s. 4d. per head during 1888, the greatest amount for any one year having been in 1882, when the value imported reached almost £5 for every inhabitant. The value per head of iron and steel, machinery and hardware combined, was £1 10s. 10d.; wine and liquors, 15s. 3d.; flour, 9s. 2d.; boots and shoes, 9s. 1d. None of the other values reach such large figures as those mentioned above, though many other articles form individually very important imports. Two things are plain from a consideration of this table—the great purchasing power of the people, and the very large scope that exists for the production of goods which are now imported, and for the extension of manufactures within the Colony. This will, perhaps, be seen more clearly from an inspection of the gross values of some of the principal articles imported during the year 1888, as given in the following table:—

Scope for manufactures proved by large imports.

Values of the Principal Imported Articles.

Apparel, wearing	£1,051,466	Jewellery	£115,327
Arms and ammunition	127,213	Leather	71,366
Beer	394,309	Malt	129,620
Boots and shoes	543,254	Matches	52,638
Butter	102,843	Milk, condensed	73,343
Candles	96,956	Musical instruments	118,816
Chaff and hay	222,727	Paints, paperhanging, lampware	94,234
Cement	99,531	Paper, books, stationery, etc.	418,884
Cutlery and grindery	91,583	Pickles, sauces, and oilmen's stores	106,173
Drapery	2,591,203	Potatoes and vegetables	207,256
Drugs and apothecaries' ware	199,692	Saddlery and harness and saddlers' ware	104,022
Fancy goods and toys	166,692	Silver plate and ware	69,923
Fish, preserved	111,808	Spirits	442,757
Flour	631,795	Sugar	409,684
Fruit, bottled, dried, and green	278,702	Tea	406,239
Furniture and upholstery	252,021	Timber	527,834
Glass and glassware	103,441	Tobacco and cigars	211,698
Grain and pulse	564,504	Watches and clocks	90,714
Hardware	428,039	Wine	118,643
Iron and iron manufactures and machinery	1,421,312		
Jams and jellies	66,933		

EXPORTS.

New South Wales exports, larger than other colonies.

The export trade of New South Wales, like the import, is larger than that of any other Australian colony, both in regard to the total value and the value per head of population. Compared with the imports generally, the exports, for the reasons which will hereafter appear, fall considerably short; but compared with those of other colonies, the extent of the New South Wales exports of home produce is very satisfactory. Taking the year 1888, the last for which all the figures are available, the export trade of the Australasian Colonies was:—

	£
New South Wales	17,289,487
Victoria	10,356,633
Queensland	5,113,289
South Australia	4,670,573
New Zealand	7,255,128
Tasmania	1,303,308
Western Australia	673,521

Large re-export trade of certain colonies.

There is a defect in the figures, as far, at least, as three of these colonies are concerned. New South Wales, Victoria, and South Australia have each a large re-export trade, especially in raw produce, and it frequently happens that credit is taken for the produce of other colonies in the returns showing the export of home produce. So far as New South Wales is concerned, this over-crediting chiefly takes place in regard to gold received from Queensland for coinage, and amounted to about £1,400,000. To what extent the Customs value of home produce is overstated in Victoria and South Australia is not apparent from the returns; but in the case of the first named colony much of the produce of New South Wales passing through Victoria for transhipment to England is exported as Victorian produce. This is very noticeable in the case of wool, as Port Phillip wool commands a higher price than that of New South Wales. According to the Customs statistics of that colony, the quantity of wool imported during 1888 amounted to 65,963,561 lb., valued at £2,704,058, while the export of wool other than Victorian, amounted to only 29,143,620 ℔., valued at £1,415,617, the difference in value, amounting to nearly £1,300,000, being credited as Victorian home produce, and the returns overstated to that extent. How far this system obtains in other directions it is impossible to say.

Preponderance of home products in exports.

Dividing the exports of New South Wales into two classes—those which are the produce and manufacture of the Colony, and those imported from other countries,—the preponderance of home produce exported is very marked. The figures for the twelve years that closed with 1888, which are given below, show a large increase in home produce exported, reaching £16,506,122 in 1883, falling, however, in the subsequent years, until in 1886 the amount reached only £12,884,200. The figures for 1887 show a gain of nearly £2,600,000, while those of 1888 are the highest on record, viz., £17,289,487. The decline between 1883 and 1886 is to a great extent due to the fall in the price of wool, and to the losses sustained by reason of the dry season of 1885–6. The exports of produce other than that of the Colony have also shown a decline since 1883, a circumstance to a large extent to be ascribed to the same causes, the decline being very noticeable in the value of wool and tin re-exported.

Home and Foreign Produce Exported.

Year.	Home produce exported.	Foreign produce exported.	Total exports.
	£	£	£
1877	11,036,839	2,421,061	13,457,900
1878	10,885,037	2,249,368	13,134,405
1879	10,820,756	2,311,175	13,131,931
1880	12,837,446	2,845,356	15,682,802
1881	13,153,795	3,154,010	16,307,805
1882	14,168,853	3,508,502	17,677,355
1883	16,506,122	3,756,151	20,262,273
1884	14,921,520	3,655,770	18,577,290
1885	13,166,243	3,583,864	16,750,107
1886	12,884,200	2,662,013	15,556,213
1887	15,472,361	3,024,556	18,496,917
1888	17,289,487	3,570,224	20,859,715

Value of export trade declined since 1880.

It will be seen from the table given above that, although the value of New South Wales produce exported during 1887 was only exceeded in the year 1883 the value per head was less than that of any year of the period from 1871 to 1888, 1885 and 1886 excepted. In both regards, however, a considerable improvement is visible in the figures for 1888. The decrease in value per head has been very considerable since 1883. In the year mentioned the exports of home produce amounted to £19 15s. 9d., while those of 1887 had fallen to £15 2s. 8d., a decrease of about 24 per cent. Those of 1888 amounted to only £16 5s., which, though better than the three preceding years, is still below the value of 1884. The major part of this decrease may be set down as due to the fall in the price of wool. The values of exports per head for each year since 1871 were:—

Value of Exports of New South Wales per head.

Year.	New South Wales produce exported.	Other produce exported.	Year.	New South Wales produce exported.	Other produce exported.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1871	18 3 4	3 19 9	1880	17 13 10	3 18 5
1872	15 6 9	4 11 3	1881	17 6 1	4 2 11
1873	18 13 9	4 9 9	1882	17 16 7	4 8 3
1874	18 2 5	3 16 11	1883	19 15 9	4 10 0
1875	19 16 11	3 15 1	1884	16 18 10	4 3 0
1876	17 16 6	3 15 10	1885	14 2 11	3 16 11
1877	17 11 0	3 16 11	1886	13 3 1	2 14 6
1878	16 11 0	3 8 4	1887	15 2 8	2 19 2
1879	15 13 4	3 6 11	1888	16 5 0	3 7 1

Depreciation in value since 1881

The value of the exports of the Colony is determined by the price obtained for wool and a few other articles of raw produce; it therefore follows that any fall in the prices of these commodities will very materially affect the total sum represented by the exports. Such a fall has occurred since 1881. If the prices realized in 1888 were equal to those of 1881, the value of home produce would have been £19,533,266 instead of £17,289,487, as was actually the case. The following table shows the values of exports during each year since 1881, and also the sum that would have been obtained had the price of that year been sustained. The difference above and below the actual prices is also given.

Year.	Actual Value of Exports.	Value if 1881 prices ruled.	Difference.	Amount of Bullion and Coin included in Exports.
	£	£	£	£
1881	15,153,795	15,153,795	....	1,914,345
1882	14,168,853	13,935,975	† 232,878	1,679,270
1883	16,506,122	16,060,501	† 445,621	1,685,661
1884	14,921,520	14,674,194	† 247,326	931,896
1885	13,166,243	13,483,531	*1,317,288	1,443,223
1886	12,884,200	14,796,327	*1,912,127	1,609,242
1887	15,472,361	17,297,042	*1,824,681	1,291,066
1888	17,289,487	19,533,266	*2,243,779	1,717,560

* Prices of 1881 above actual prices. † Prices of 1881 below actual prices.

Price level of Exports.

Eliminating the value of bullion and coin, and comparing the remaining commodities, it would appear, taking the prices of 1881 as the standard level, that the values varied from 3·1 per cent. above to 14·4 per cent. below during the years given, the

Price-level.

year of highest prices being 1883, and of lowest 1886. The following are the price-levels, the prices of 1881 being represented by 1,000 :—

Year.	Price-level.	Year.	Price-level.
1881.........	1,000	1885..... ...	900
1882.........	1,019	1886.........	856
1883.........	1,031	1887	887
1884.........	1,018	1888..	875

Value of trad if 1881 prices had continued.

It is obvious therefore that a bald comparison either of total exports or exports *per capita* only partly states the truth in regard to the trade of the Colony. Allowances, such as are shown in the foregoing tables, must be made to gauge the volume of trade. The following figures have therefore been compiled to supplement the information on page 168. This table is constructed on the same ines as the former one, and shows the exports of home produce per head, the exports if 1881 prices were obtained, and the increase decrease of the actual value on those of 1881 :—

Year.	Actual Exports per head.			Value per head if 1881 prices ruled.			Differences.			Export of Bullion, &c., per head.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1881	17	6	1	17	6	1	....			2	10	4
1882	17	16	6	17	10	8	†0	5	10	2	2	3
1883	19	15	9	19	5	1	†0	10	8	2	0	5
1884	16	18	10	16	13	3	†0	5	7	1	1	2
1885	14	2	11	15	11	2	*1	8	3	1	11	0
1886	13	3	1	15	2	1	*1	19	0	1	12	10
1887	15	2	8	16	18	8	*1	16	0	1	5	6
1888	16	5	0	18	7	2	*2	2	2	1	12	3

* Prices of 1881 above actual prices. † Prices of 1881 below actual prices.

Fall in prices

The effect of bringing into account the fall of prices is very striking. During the eight years under review at actual prices there was a difference in the value of trade per head between the highest and lowest years (1883 and 1886) of £6 12s. 8d., while, if the prices of 1881 had been maintained, the difference would have been only £4 3s. between the same years.

Value of exports per head.

The value of exports, the produce of the Colony, during the last twelve years, compared with those of the other colonies, shows that not only were the exports of New South Wales more valuable in the gross, but, when tested by the standard of population, exceeded those of all the other Colonies, with the exception of Queensland. Thus, for the last twelve years, the average value of exports per head has amounted to—

	£	s.	d.
New South Wales	16	10	0
Victoria	12	13	9
Queensland	16	14	10
South Australia	15	6	7
New Zealand	12	14	10
Tasmania	11	19	3
Western Australia	15	6	8

Chief articles of export.

The chief articles of export are wool, coin, coal, live-stock, tin, silver, copper, skins, and tallow. Other articles have also been exported to considerable value in times past, but their importance has disappeared, or is lost in comparison with that of the products just named. Amongst such may be mentioned grain, leather, provisions, and sugar. Of some of these articles there is still a fairly large export, but of none is the export per head so large as formerly, while in the case of sugar it has practically ceased.

WOOL.

Wool the staple export.

Wool is the staple export of the Colony, and comprises considerably more than half the value of the total exports. The quantities and values of the wool exported during each year since 1879 are given below, and from the table it will be readily seen how greatly the Colony depends for its prosperity upon the produce of its flocks.

New South Wales Wool Exported.

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1879	123,710,450	6,491,198	1884	173,986,303	8,953,100
1880	154,871,832	8,040,625	1885	168,151,659	7,246,642
1881	139,601,506	7,149,787	1886	173,985,640	7,028,596
1882	146,221,182	7,433,091	1887	216,450,342	8,911,155
1883	188,161,710	9,598,761	1888	235,848,944	9,089,776

Re-export of wool.

Besides the wool grown in the Colony there has been a large re-export of other wool, chiefly from Queensland. In 1885 the export of foreign wool amounted to slightly more than 10,000,000 lb. weight, valued at £431,605; but in 1888 the quantity had fallen to 7,407,309 lb., of the value of £268,739. The exports, as returned by the Customs, are given below; but the quantities fall short of the actual amount, as not a little wool, the produce of other places, was exported in past years as New South Wales wool, on the same principle, probably, that leads to the shipment from Melbourne, as the produce of Victoria, of nearly 40,000,000 lb. weight of wool grown in New South Wales.

Wool Exported—not the produce of the Colony.

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1879	5,413,123	278,096	1884	9,030,215	429,399
1880	7,614,490	396,909	1885	10,221,766	431,605
1881	7,582,181	381,005	1886	4,664,971	173,380
1882	7,130,162	340,613	1887	7,844,867	288,916
1883	8,878,422	537,483	1888	7,407,309	268,739

Severe seasons have affected wool trade.

The severe seasons experienced during the past few years have very materially interfered with the production, and consequently with the exportation, of wool; but the splendid season of 1886–7 was attended with a considerable increase in this staple export, and this improvement was continued during 1888. There was formerly a disposition to export washed wool; the tendency is now, however, towards the export of wool in grease, except where the conditions as to carriage, &c., are exceptional.

ther exports.

The other animal products—tallow, skins, leather, and such-like—form together an export of considerable value, though, owing to the large local demand, it is not probable that there will be any material increase in the value of these articles exported.

Coal.

Coal, also, forms one of the staple exports of New South Wales, having reached a total value of over £1,000,000. The development of the coal trade of the Colony has been traced in the chapter on Mines and Minerals, and it will be seen that this product is subject to less fluctuation than any other item of export.

Silver.

The export of silver and silver-lead ore has become important since 1884, and bids fair to show considerable increase. The export both of copper and tin revived somewhat during 1888, owing to the advanced price obtained in the European markets; but there was a slight decline in the export of tin. The trade in these metals is still very much below that of 1884 and previous years.

Bullion and specie.

Gold Bullion and specie form one of the most important exports of the Colony. The export during each year since 1871 was—

	£		£
1871	2,329,426	1880	863,012
1872	2,394,037	1881	1,957,842
1873	2,936,467	1882	1,733,024
1874	1,953,942	1883	1,703,116
1875	2,106,074	1884	947,513
1876	1,661,772	1885	1,461,478
1877	1,895,030	1886	1,619,278
1878	1,810,670	1887	1,318,917
1879	806,687	1888	2,122,764

Taken by itself, the foregoing statement might seem to favour the opinion sometimes hazarded that the Colony is being denuded of its gold. Such is not the case. The gold shipped is chiefly the produce of other colonies, sent to Sydney to be minted; for out of the large sum exported during 1888 only about £136,000 was New South Wales produce. In another part of this volume it has been pointed out that the amount of coin in the Colony is yearly increased, so that the circulation in 1888 was nearly twice that of 1878.

Exports of home produce.

Divided into the classes adopted for the imports, the exports of home produce in 1888 appear as follows :—

	£
Food and beverages, including breadstuffs..	304,249
Wine, fermented and spirituous liquor	27,615
Live stock..............	1,805,342
Animal and vegetable products, including wool ...	9,853,225
Clothing and textile fabrics	34,620
Minerals and metals, raw or partly worked up, not including coal, coin, and bullion	2,006,627
Coal..	1,089,403
Specie and precious metals............	1,792,489
Articles of education, art, and amusement......	62,288
Manufactured articles not included elsewhere	272,999
Unclassified	3,630
Total	17,289,487

Raw materials largest export.

By far the larger portion of the exports consists of raw materials. As an export manufacturing country New South Wales has not yet achieved any position; and, though its manufactures are of very considerable importance, as will hereafter appear, its own markets furnish so wide a scope for manufacturing industry as to make it improbable that there will be any great development of export trade in home manufactures in the immediate future So many channels have been presented for the successful employment of capital that little attention has been bestowed upon the possibility of New South Wales supplying other countries with its own manufactures; but as these outlets of capital are closed, the vast possibilities of the country in other directions will doubtless be recognised. The following table has been prepared with the view of showing the relative importance, and the proportion per head of population, of each of the principal articles exported. The preponderance of raw material, and raw material advanced one stage towards the finished manufacture, will be apparent.

Chief articles exported.

Value per Head of the Principal Articles of Home Produce and Manufacture Exported.

Articles.	1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Coal	21	6	20	1	11	9	11	0	16	3	19	10	21	2	20	9	19	4	18	9	20	0
Coin*	50	3	20	0	22	10	42	11	38	6	37	4	19	6	29	6	32	4	24	7	31	9
Copper	10	6	7	5	10	0	9	4	8	2	13	10	9	5	5	8	3	5	3	5	5	2
Flour	0	5	0	4	0	3	0	5	0	9	0	7	0	6	0	4	0	5	0	5	0	10
Fruit	2	2	2	6	2	6	2	10	2	2	2	9	2	3	2	5	2	3	2	11	2	5
Gold	1	5	0	2	0	0½	7	5	3	10	3	1	1	9	1	8	0	9	0	10	0	8
Grain and pulse	4	8	3	10	3	0	3	4	1	7	1	5	1	6	1	9	1	1	1	6	1	6
Leather	2	9	1	10	2	10	3	7	3	7	2	4	2	10	2	3	2	1	1	9	2	6
Boots and shoes	1	5	1	5	1	4	1	2	1	2	1	3	1	3	1	0	0	6	0	8	0	9
Live stock	22	4	26	6	27	0	20	5	18	8	18	10	27	2	20	11	19	2	27	7	33	11
Provisions	1	10	4	5	5	2	5	4	4	5	6	7	4	2	3	10	1	7	3	10	2	5
Silver and silver ore	0	5	0	6	0	7	0	4	0	2	0	5	3	3	5	9	8	8	11	3	21	5
Skins	2	8	4	0	5	1	5	6	6	7	7	1	6	7	5	10	6	2	5	8	5	10
Sugar	4	1	4	11	4	9	3	1	1	10	1	5	0	10	...	...	...	...	...	...	...	...
Tallow	2	11	6	3	9	8	7	0	5	11	8	7	4	6	4	2	3	0	4	9	3	8
Timber	1	1	1	0	0	6	0	7	1	0	1	7	2	4	1	2	1	3	1	8	2	3
Tin	12	1	10	10	13	0	19	1	20	11	19	9	11	10	8	11	9	6	10	3	10	11
Wool	74	0	188	0	221	7	188	1	187	0	230	1	203	3	155	8	143	5	174	4	170	10

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* Coined at Mint, but mostly from gold the produce of other Colonies.

Home produce exported.

The values of some of the principal articles of home produce exported, during 1888, including those mentioned above, were as follows :—

Export of Home Produce.

	£		£
Boots and shoes	26,237	Live stock	1,805,342
Coal	1,064,472	Provisions (meat)	130,064
Coin	1,689,537	Shale (kerosene)	52,684
Copper	275,034	Silver and ore	1,142,405
Flour	46,069	Skins	312,288
Fruit	128,741	Tallow	207,888
Gold	36,824	Timber	121,552
Grain	79,814	Tin	582,496
Leather	116,810	Wool	9,089,776

Trade in live stock.

The number and value of the live stock exported have varied considerably from year to year, being affected greatly by the seasons experienced both in this and the neighbouring colonies.

Export of hors declined.

The export of horses has declined, as far as numbers are concerned, but the values have increased. On the other hand the imports show an increase in number and in value. The figures in respect to horses are to some extent misleading, as the number of thoroughbred racing animals passing backwards and forwards between Sydney and Melbourne, which are entered as exports and imports, gives more importance to the trade than its magnitude really warrants.

The decrease in the number of cattle depastured in the Colony has been attended by a diminished export, and whilst the exportation of sheep has also fluctuated greatly since 1883, the number of horned cattle imported has largely increased. The failure of the pastures throughout a portion of the Colony led to a partial exodus of sheep in 1884, and in 1885 there was a correspondingly large return.

Returns of sto misleading.

But, as in the case of horses, the figures for the export and import of other live stock are to a certain extent misleading, inasmuch as the returns are swollen by the inclusion of stock sent from one colony to another, in the hope of obtaining better pasturage, or for fattening or breeding purposes. The general tendency of the trade, however, can be gathered from the table below. Correct figures were obtained for all the colonies except Queensland, but the overland Queensland trade, both for exports and imports, has been greatly understated. The total trade in live stock during 1888 was—

Trade in live stock.

Trade in Live Stock.

Live stock.	Imported.		Exported.	
	Number.	Value.	Number.	Value.
		£		£
Horses..................	3,423	102,065	4,054	100,207
Horned cattle.........	112,668	517,075	125,786	757,674
Sheep	254,018	146,709	2,327,406	935,668
Pigs	2,343	3,096	8,886	8,831
Other stock	159	1,470	15	225
Total	372,611	770,415	2,466,147	1,802,605

RE-EXPORT TRADE.

Re-export trade considerable.

The re-export trade of the Colony has increased considerably during the past decade, but has now reached a point beyond which it is not likely to advance for some years. The shipping facilities of Sydney have hitherto attracted to the port a large amount of trade from New Zealand, Queensland, and the South Seas, for transhipment to Europe ; but the establishment of direct communication between these colonies and Europe has checked to some extent the expansion of the re-export trade, though it is not probable that it will fall below its present dimensions. The re-export overland trade is comparatively limited, amounting in 1888 to £552,986, out of a total of £3,570,228.

Overland trade in foreign produce.

The total value of the re-exports of the Colony during each of the past eleven years was as follows:—

Value of re-exports.

Year.	Seaward.	Overland.	Total.
	£	£	£
1878	2,189,658	59,710	2,249,368
1879	2,278,151	33,024	2,311,175
1880	2,797,476	47,880	2,845,356
1881	3,093,454	60,556	3,154,010
1882	3,430,251	78,251	3,508,502
1883	3,661,223	94,928	3,756,151
1884	3,521,743	134,027	3,655,770
1885	3,418,920	164,944	3,583,864
1886	2,536,633	135,380	2,672,013
1887	2,863,302	161,254	3,024,556
1888	3,017,242	552,986	3,570,228

It will be seen that the amount of re-exports has kept pace fairly with the increase of population, the greatest decline being during 1886, which was due in all probability to the depression in trade experienced almost everywhere during that year. A slight revival took place in 1887, which was continued until the following year, but the total volume of trade and the ratio per head of population is still very much below some previous years. The subsequent table, giving the value per head of foreign produce exported since 1871, will illustrate its comparative importance during each year.

Re-export trade has kept pace with increase of population.

Value per Head of Foreign Produce Exported.

Year.	Value.	Year.	Value.	Year.	Value.
	£ s. d.		£ s. d.		£ s. d.
1871	3 19 9	1877	3 16 11	1883	4 10 0
1872	4 11 3	1878	3 8 4	1884	4 3 0
1873	4 9 9	1879	3 6 11	1885	3 16 11
1874	3 16 11	1880	3 18 5	1886	2 14 6
1875	3 15 1	1881	4 2 11	1887	2 19 2
1876	3 15 10	1882	4 8 3	1888	3 7 1

Amongst raw materials the principal articles re-exported are copper, tin, and wool; the manufactured articles are chiefly drapery, apparel, hardware, iron and steel, books and stationery,

Principal re-exports

boots, beer and spirits, and also large quantities of provisions. Grouped under the several heads already adopted for the imports and exports, the value of the trade for the year 1888 will be found below.

Re-export Trade.

	£
Food and beverages, including breadstuffs	497,447
Wines, fermented and spirituous liquors	136,905
Live stock	68,792
Animal and vegetable products, including wool	527,480
Clothing and textile fabrics	500,616
Minerals and metals, raw or partly worked up, not including coal, coin, and bullion	434,110
Specie and precious metals	408,669
Articles of education, art, and amusement	268,808
Manufactured articles not elsewhere included	671,348
Articles unclassified by Customs	56,053
Total	3,570,228

Indirect benefit of re-exports.

The benefit derived by the Colony from its re-export trade is indirect and can hardly be estimated. The freights earned by New South Wales vessels carrying such produce do not amount to a large sum, as the carriage is chiefly in other hands. Still the trade is valuable, the probable sum accruing to the Colony from this source being about 5 per cent. on the total value of the trade, as shown in the following table :—

Approximate Earnings from Re-export of Foreign Produce.

	£		£
1877	121,053	1883	187,807
1878	112,468	1884	182,788
1879	115,558	1885	179,193
1880	142,267	1886	133,600
1881	157,700	1887	151,228
1882	175,425	1888	178,511

OVERLAND TRADE.

Overland trade affected by railway.

As the major portion of the goods exported overland simply passes through the border colonies of Victoria and South Australia, to Great Britain, the diversion of the trade along the railways of

Effect of railways on trade.

the Colony to its ports, must be looked upon as a distinct gain. It was believed that the extension of the trunk railways to the centres of the pastoral industry would have the effect of permanently diverting a no inconsiderable part of trade from Victoria and South Australia, but the following table will show that such diversion has only been partial, and that a large volume of trade, especially to Adelaide, is almost entirely governed by the state of the rivers. A marked increase will be noticed in 1887 and 1888. This was largely due to the requirements of the population of the Broken Hill silver-field, whose nearest market is by rail to Adelaide.

Overland Trade.

Year.	Imports.	Exports.	Total.
	£	£	£
1877	1,871,816	3,474,861	5,346,677
1878	2,090,611	3,845,648	5,936,259
1879	1,535,421	4,149,047	5,684,468
1880	1,438,155	4,768,542	6,206,697
1881	1,708,648	4,022,461	5,731,109
1882	1,912,409	4,995,645	6,908,054
1883	2,320,495	4,307,623	6,628,118
1884	2,186,553	4,830,770	7,017,323
1885	2,611,130	3,405,073	6,016,203
1886	1,699,589	4,090,074	5,789,663
1887	2,801,492	5,206,621	8,008,113
1888	2,696,290	5,499,266	8,195,556

TRADE OF AUSTRALASIAN COLONIES.

Trade larger than any other colony.

The trade of New South Wales is larger, both in the gross amount and the value per head, than that of any of the other Colonies of Australasia. The total trade of each colony, and the trade per head, for the past eleven years are given below; and though the latter part of the period was one of severe depression, the magnitude of the trade, not only of this Colony but of the rest of the group, is very suggestive. In gross amount the trade of Victoria ranks second, but in point of value per head is surpassed by South Australia, and, if the average of the last two years be taken, both by Queensland and Western Australia.

Trade of Australasian Colonies.—Total Value per Head in Each Colony.

Year.	New South Wales.		Victoria.		South Australia.	
	Total value.	Value per head.	Total value.	Value per head.	Total value.	Value per head.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
1878	28,239,050	42 18 7	31,087,587	37 16 10	11,074,632	45 10 6
1879	27,635,757	40 0 3	27,489,708	32 19 2	9,776,877	38 6 6
1880	29,858,865	41 2 10	30,511,453	35 17 7	11,156,003	42 3 9
1881	33,894,817	44 11 8	32,970,624	37 16 11	9,631,821	34 2 7
1882	39,145,254	49 5 1	34,941,660	39 1 5	12,067,678	41 13 4
1883	41,785,114	50 1 8	34,142,709	37 3 0	11,193,516	37 10 1
1884	41,738,206	47 7 9	35,252,098	37 4 10	12,373,057	40 3 5
1885	40,487,568	43 9 10	33,596,362	34 9 2	11,184,658	35 0 0
1886	36,529,761	37 5 5	30,325,896	30 14 5	9,341,760	29 16 9
1887	37,303,153	36 9 8	30,373,296	29 15 10	10,427,073	33 7 2
1888	41,745,242	39 4 7	37,825,897	35 11 4	12,397,736	39 12 10

Year.	Queensland.		Western Australia.		Tasmania.		New Zealand.	
	Total value.	Value per head.	Total value.	Value per head.	Total value.	Value per head.	Total value.	Value per head.
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
1878	6,626,496	32 0 10	807,541	28 16 9	2,640,507	24 6 7	14,771,188	34 17 7
1879	6,514,923	30 8 4	902,182	31 15 0	2,568,572	23 1 11	14,117,711	31 10 1
1880	6,535,456	29 8 10	852,852	29 11 4	2,881,154	25 7 2	12,514,703	26 7 8
1881	7,603,991	34 8 1	907,601	30 15 0	2,986,720	25 9 2	13,517,911	27 7 10
1882	9,852,915	41 9 4	1,091,810	35 18 6	3,258,261	26 19 10	15,267,278	30 1 3
1883	11,509,959	42 19 4	963,856	30 15 0	3,564,236	28 13 3	15,070,037	28 9 5
1884	11,055,840	37 0 3	926,860	28 13 5	3,131,975	24 7 11	14,755,555	26 14 0
1885	11,665,894	36 12 9	1,097,083	33 4 0	3,071,179	23 4 9	14,299,860	25 6 2
1886	11,037,197	32 19 4	1,388,406	37 2 9	3,088,107	22 16 9	13,431,804	23 1 4
1887	12,275,556	34 12 0	1,271,010	30 19 6	3,046,188	21 15 7	13,111,684	21 19 9
1888	11,771,253	31 4 1	1,466,596	34 13 2	2,943,929	20 8 1	13,709,225	22 12 11

BRITISH TRADE.

British trade holds first position

The British trade holds the first position in regard to value, being larger, in most years, than even the intercolonial trade of the Colony; and if to the value of goods coming directly from Great Britain were added that of goods passing through the neighbouring colonies, but destined for, or coming from, England, the proportion of British trade would be still higher. For, though the nominal trade between Great Britain and New South Wales amounted in 1888 to the large sum of £17,689,650, out of a total trade of £41,745,272, it is probable that the actual value of this trade was considerably more than £22,000,000. The amount of trade as set down in the subsequent table is, therefore, much below the truth, especially in regard to exports, as the larger part of the produce exported to Victoria and South Australia overland is in reality destined for British ports. The seaward trade alone can be given, and this will be found below for the years which have elapsed since 1870.

Trade with Great Britain.

Year.	Imports.	Exports.	Total British trade.
	£	£	£
1870	3,200,706	2,492,640	5,693,346
1871	3,252,617	4,378,281	7,630,898
1872	3,728,457	4,926,728	8,655,185
1873	5,137,139	6,657,559	11,794,698
1874	4,888,725	5,737,066	10,625,791
1875	6,062,226	6,374,503	12,436,729
1876	5,763,533	5,918,187	11,681,720
1877	6,471,780	6,018,926	12,490,706
1878	6,658,628	5,516,437	12,175,065
1879	6,749,519	5,148,609	11,898,128
1880	6,536,661	7,525,637	14,062,298
1881	8,986,838	7,561,114	16,547,952
1882	11,155,917	7,309,691	18,465,608
1883	10,624,081	9,884,207	20,508,288
1884	11,423,047	7,683,880	19,106,927
1885	11,885,597	7,293,133	19,178,730
1886	10,445,980	6,026,954	16,472,934
1887	7,998,568	6,966,056	14,964,624
1888	9,212,981	8,476,669	17,689,650

INTERCOLONIAL TRADE.

Value of intercolonial trade

Next in importance to the British trade stands the intercolonial, the value of which amounted in the year 1888 to £8,741,147 imports, and £9,548,200 exports, or a total trade of £18,290,047, a sum somewhat larger than the nominal trade with Great Britain.

Year.	Imports.	Exports.	Total trade.
	£	£	£
1877	6,416,757	6,628,822	13,045,579
1878	6,468,978	6,802,373	13,271,351
1879	5,634,808	7,120,840	12,755,648
1880	5,945,788	7,381,172	13,326,960
1881	6,229,916	6,981,456	13,211,372
1882	7,289,823	8,425,903	15,715,726
1883	8,054,390	7,943,332	15,997,722
1884	8,507,199	8,708,323	17,215,522
1885	8,595,439	6,936,139	15,531,578
1886	7,746,005	7,544,139	15,290,144
1887	8,651,954	8,968,491	17,620,445
1888	8,741,847	9,554,200	18,296,047

Trade with other colonies during 1886-1888.

The trade of the other Australasian colonies with New South Wales showed an increase during 1888 of £675,602, and of £3,005,903 since 1886. The reason of this advance will be found in the increased value of the wool clip of the year, and the diversion of part of the trade of the Western districts of the Colony from New South Wales seaports to those of the neighbouring colonies. As already pointed out, a great proportion of the intercolonial export trade, especially that which is sent overland, represents produce of this colony ultimately destined for European markets, though credited to the colony to which it is sent in the first instance. The favourable state of the rivers enabled a greater amount of produce to be dispatched to Melbourne and Adelaide during 1887 than in the years 1886 and 1888, hence the large advance noted above. Similarly with the import trade, the large part of the increase comprises goods originally coming from Great Britain, but purchased in the Melbourne and Adelaide markets. The total value of the intercolonial trade as already stated, amounted during 1888 to £18,296,047, a sum larger than in any former year, exceeding even 1884, aided as that year was by a fair season and a higher price for wool.

TRADE WITH VICTORIA.

Value of trade with Victoria.

Victoria comes first amongst the colonies of the group, as regards the value of its trade with New South Wales, though its importance has sensibly declined during late years, especially in regard to exports. It is estimated that prior to the extension of the railway system of this Colony into the Riverine districts, nearly one-fourth of its territory, comprising some of the richest districts in the Colony, traded almost exclusively with Victoria. This trade has now been, to a great extent, diverted along New South Wales lines to Sydney; hence the decrease observable, which will be more plainly seen in the table on page 187, showing the overland trade with Victoria.

Large range of articles imported from Victoria.

The import trade of the Colony from Victoria covers a large range of articles, and in this respect differs from the export, which is mainly comprised in three leading items of raw produce—wool, stock, and coal. Dividing the imports from Victoria into two classes, viz., Victorian and other produce, the chief imports under the former class are agricultural implements, butter, breadstuffs, fruit, oats, hay and other fodder, and vegetables; while under the second head come drapery and apparel, drugs, hardware, iron, jewellery, machinery, stationery, and other manufactured articles. Victorian produce, properly so called, comes chiefly to Sydney; the other articles are taken by the southern and western portions of the Colony, which have for many years looked to Victoria as a market whence such supplies are to be derived. The following are

Imports from Victoria.

the values of the principal items of import from Victoria d
the last five years :—

Principal Imports from Victoria.

Description of Goods.	1884.	1885.	1886.	1887.	1
	£	£	£	£	
Agricultural implements.....	30,639	30,233	26,005	53,229	3
Bags and sacks	10,286	17,324	11,773	12,922	
Beer (in wood and bottle) ...	20,463	13,424	11,717	20,309	1
Biscuits	9,907	9,873	6,133	3.289	
Boots and shoes	37,250	33,971	28,662	30,772	5
Butter	58,314	49,161	35.331	7,986	1
Candles	12,251	14,093	4,678	5,668	
Cheese............................	4,813	4,803	6,304	1,285	
Cordage and ropes	16,233	9,988	6,394	6,248	
Drapery and apparel	422,924	469,959	396,850	366,072	33
Drugs & Apothecaries' wares	45,256	59,736	19,038	22,711	2
Earthenware and China	15,066	14,543	7,625	9,787	
Flour	216,546	291,999	384,037	364,107	28
Fruit—					
Green	29,116	20,901	27,265	14,914	1
Dried	12,375	10,757	21,326	17,803	
Furniture and upholstery ...	39,589	42,395	22,120	14,860	1
Gold (coin, bars, and dust)..	75,530	62,717	303,312	274,628	12
Grain and Pulse—					
Wheat	23,907	23,433	57,729	34,050	1
Oats.............................	27,602	16,437	14,201	17,264	10
Others..................	25,631	15,016	33,109	24,694	1
Hardware	56,263	54,122	39,248	39,234	3
Hay and chaff	153,796	64,950	183,319	59,492	10
Hops	4,728	4,380	3,721	10,398	
Iron and steel goods	59,621	49,161	30,649	41,769	6
Jams and jellies	13,815	7,266	8,979	4,019	
Jewellery	18,236	28,443	19,365	7,917	1
Leather	21,328	18,863	15,202	17,255	1
Live stock	476,309	802,760	225,746	542,588	51
Machinery	72,619	68,072	30,537	41,318	5
Malt	17,862	6,770	2,937	4,220	
Musical instruments	16,812	18,575	13,347	13,529	1
Oatmeal	20,108	21,682	14,025	8,845	1
Oils	26,446	12,903	11,428	17,834	1
Paper, books, stationery, &c.	76,517	73,168	59,293	56,611	5
Potatoes...........................	123,222	134,823	166,986	71,812	9
Saddlery and harness	11,774	11,809	7,714	9,872	
Soap	10,203	11,417	7,961	7,777	1
Spirits..............................	34,049	34,509	30,075	31,221	2
Sugar (raw)	63,650	48,313	36,118	56,104	5
Tea	105,318	98,741	93,463	121,731	9
Timber	21,332	23,134	18,634	11,951	1
Tobacco, cigars, &c............	18,476	19,182	15,151	22,249	2
Toys	15,084	19,089	9,132	11,569	1
Vegetables (green) and onions	50,419	43,064	35,275	32,633	3
Wines..............................	10,817	9,004	7,004	7,780	
Woolpacks........................	21,502	10,335	9,646	22,713	1

Wool chief export.

The chief export to Victoria is wool, forwarded to Melbourne r shipment to London and other European ports. The value of ool exported to Victoria during the last twelve years was:—

	£		£
1877	2,248,574	1883	2,502,205
1878	2,154,301	1884	2,229,873
1879	2,709,736	1885	1,868,019
1880	3,224,289	1886	1,931,278
1881	2,783,969	1887	2,451,552
1882	2,396,528	1888	2,187,759

The decrease noticeable in the values given above is due mainly the extension of the railway system of the Colony, and the nsequent diversion of traffic to Sydney from the old routes; but he decrease is also partly attributable to the fall in the value of he staple, which has taken place in recent years.

Export of stock

Live stock of all kinds forms a large portion of the exports to ictoria, though the imports, especially of sheep, have also been nsiderable; and in 1885 the balance of trade was in favour of he southern colony. Victoria has already reached the limit where he demand for meat equals the cast of stock; and is, therefore, pendent upon the other colonies, especially New South Wales, for he supply of the deficiency, the amount of which is little short of e-fourth of the whole consumption.

Export of coal.

Coal is next in importance as an export of this Colony to ictoria, the value during 1888 being £406,744. The only other oduce worthy of special note are skins and timber, the former ing sent to Victoria for re-export. The following table gives he trade of each year since 1870; but as no records were kept uring certain years in which border duties were not collected, the tals for such years are necessarily only approximate. The figures nce 1874 are, however, exact.

Trade with Victoria.

Year.	Imports.	Exports.	Total.
	£	£	£
1870	1,153,695	2,583,552	3,737,247
1871	1,698,236	4,577,559	6,275,795
1872	1,188,781	2,858,191	4,046,972
1873*	....	3,366,963	....
1874	1,349,062	3,614,456	4,963,518
1875	2,066,156	4,269,770	6,335,926
1876	2,376,777	4,043,566	6,420,343
1877	2,531,449	3,898,129	6,429,578
1878	2,897,503	3,694,434	6,591,937
1879	2,234,381	4,177,871	6,412,252
1880	2,187,119	4,578,867	6,765,986
1881	2,414,590	4,052,694	6,467,284
1882	2,770,245	3,781,421	6,551,666
1883	3,012,268	4,170,599	7,182,867
1884	3,064,816	4,170,497	7,235,313
1885	3,309,696	3,450,796	6,760,492
1886	2,789,700	3,697,343	6,487,043
1887	2,894,681	4,773,815	7,668,496
1888	2,472,621	5,455,196	7,927,817

* No Returns of the overland trade for this year.

Exports to Victoria

The following are the value of the principal articles exported to Victoria during five years:—

Principal Exports to Victoria.

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Coal	270,986	291,161	336,979	379,206	406,744
Coin—Gold	1,258	......	45,000	......	......
Copper	3,560	3,958	4,658	12,590	7,257
Flour	17,777	10,336	17,043	10,463	11,969
Fruit (fresh)	40,073	55,834	55,861	73,760	60,014
Grain and Pulse—					
Wheat	7,708	2,531	17,159	14,991	18,667
Others	8,071	12,057	17,102	5,203	5,339
Kerosene shale	9,690	11,386	12,942	13,703	12,703
Live stock	1,020,287	692,947	696,028	1,112,720	1,636,530
Periodicals, books, paper, stationery, &c.	1,789	663	1,783	28,190	20,710
Skins	103,279	109,222	66,777	70,334	81,043
Timber	61,697	25,960	42,224	54,081	83,188
Wool	2,229,493	1,867,359	1,931,278	2,451,552	2,187,759

Overland trade with Victoria.

The greater portion of the exports to Victoria, as well as nearly half the imports, are borderwise. The value of the imports overland, however, fell greatly, from the causes already specified, during the year 1886, when they reached only £874,680, or scarcely one-third of the total value of goods imported, increasing again in 1887 to £1,418,212, or about the normal average. The value in each of the past nineteen years was—

Overland Trade with Victoria.

Year.	Imports.	Exports.	Total.
	£	£	£
1870	448,308	1,811,848	2,260,156
1871	491,632	3,027,714	3,519,346
1872	464,185	2,123,622	2,587,807
1873*	…………	2,758,116	…………
1874	452,086	2,812,477	3,264,563
1875	945,049	3,546,674	4,491,723
1876	1,246,880	3,294,795	4,541,675
1877	1,360,171	2,869,945	4,230,116
1878	1,357,715	2,661,639	4,018,754
1879	933,999	3,394,764	4,328,763
1880	963,620	3,824,310	4,787,930
1881	1,210,931	3,229,664	4,440,595
1882	1,217,120	2,867,810	4,084,930
1883	1,266,330	2,955,808	4,222,138
1884	1,331,908	3,118,389	4,450,297
1885	1,555,139	2,450,444	4,005,583
1886	874,680	2,537,549	3,412,229
1887	1,418,212	3,421,254	4,839,466
1888	1,005,497	4,029,349	5,034,846

* No returns of the overland trade for this year.

TRADE WITH QUEENSLAND.

Trade with Queensland.

Queensland ranks next to Victoria in regard to the value of its trade with New South Wales, which in some respects is even more important than that of the southern colony. The estimated value of the imports and exports since 1870 is given below. It is possible that the amounts are somewhat understated, as there is a good deal of trade in stock which does not come under the cognisance of the Customs officers. Though New South Wales and Queensland have a common boundary of 900 miles, the overland trade, except in live stock, is not large. If, however, the value of stock be added, the figures reach a very large total, as will be seen from the subjoined tables.

Trade with Queensland.

Year.	Imports.	Exports.	Total trade.
	£	£	£
1870	1,240,877	639,761	1,880,638
1871	1,921,790	715,287	2,637,077
1872	2,150,452	1,053,386	3,203,838
1873	2,248,609	953,017	3,201,626
1874	2,569,989	1,138,880	3,708,869
1875	2,521,310	1,238,226	3,759,536
1876	2,117,318	1,179,291	3,296,609
1877	2,476,141	1,830,209	4,306,350
1878	2,149,534	1,390,147	3,539,681
1879	2,206,094	1,444,769	3,650,863
1880	2,224,421	1,362,262	3,586,683
1881	2,169,105	1,959,925	4,129,030
1882	2,149,766	3,012,782	5,162,548
1883	2,951,558	2,314,087	5,265,645
1884	2,983,178	2,387,085	5,370,263
1885	2,913,588	2,174,266	5,087,854
1886	2,568,438	1,667,862	4,236,300
1887	3,152,664	2,001,765	5,154,429
1888	3,133,883	1,913,553	5,047,436

Imports from Queensland.

The imports from Queensland are chiefly comprised under a few items. The value of wool imported during 1888 was £203,880, being entirely for re-export. Stock was imported to the value of £479,366 of which £436,604 represented cattle. Below will be found the value of the principal imports during the last five years.

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Boots and shoes	5,174	2,969	1,889	10,596	2,020
Drapery, apparel, &c.	23,736	15,233	9,690	11,946	10,800
Fruit (fresh)	5,380	8,295	20,332	22,411	15,921
Gold (bars and dust)	1,180,469	1,021,551	1,265,972	1,534,236	1,736,343
Live stock	171,906	151,334	386,367	556,172	479,366
Meat (preserved)	28,491	146,235	635	11,998	47,551
Skins	125,655	145,893	113,103	106,304	110,404
Sugar (raw)	264,421	169,770	241,772	268,469	211,153
Tallow	53,954	81,275	21,328	41,990	42,223
Wool (greasy and washed)	433,650	507,061	276,714	305,549	203,880
Tin (ingots and ore)	219,899	118,918	144,580	206,606	183,314

Exports to Queensland.

The exports have varied greatly in value from year to year through causes similar to those affecting the imports; they comprise a large number of items, mainly of re-export. The values of the chief articles, the produce of New South Wales, exported, have been as follows in the years named:—

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Boots and shoes	34,044	27,978	11,776	23,993	18,976
Butter	14,158	7,262	1,684	7,509	7,903
Coal	21,762	29,105	12,151	10,625	4,098
Coin (gold)	268,603	215,100	397,000	259,500	278,000
Flour	1,536	1,292	1,618	7,855	28,729
Fruit (fresh)	40,830	38,417	36,514	44,039	46,786
Grain and pulse—					
Maize	41,554	59,527	20,136	50,426	45,332
All others	4,668	4,009	1,653	5,575	7,921
Iron and steel	1,083	1,288	1,536	3,829	13,538
Live stock	54,837	99,334	119,449	216,568	63,695
Timber	14,887	10,193	4,650	19,495	26,942
Tin	33,813	22,095	18,949	20,002	16,625
Wool	15,943	13,432	10,890	3,872	734
Hay	13,589	17,213	3,214	4,085	7,940

Fluctuations in overland trade.

The most remarkable year in the series given on page 188 was 1882, when the total trade reached £3,012,782, the overland export trade amounting to £1,206,408. Of this sum £1,149,835 represents the value of stock exported, viz., 3,035 horses, valued at £25,525; 29,404 cattle, valued at £302,590; and 1,645,657 sheep, of the value of £821,720. During 1886 the value of stock exported was very much less than in previous years, amounting to only £119,449; while, in 1887, the value rose to £216,568. The fluctuation in the value of stock exported will account for the variation in the amounts shown in the following table.

Overland Trade with Queensland.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	257,807	394,502	1883	649,843	569,263
1878	345,691	229,255	1884	493,680	424,940
1879	312,118	118,112	1885	669,739	337,023
1880	231,161	245,651	1886	382,875	156,122
1881	261,948	494,793	1887	670,042	272,126
1882	282,726	1,206,408	1888	535,869	110,115

TRADE WITH SOUTH AUSTRALIA.

Trade with South Australia.

The trade with South Australia is perhaps more variable than with any other Colony, depending, as it does, so largely on the state of the Murray and Darling Rivers. In the subsequent table the years that are marked by a large export trade are those in which the rivers afforded special facilities for navigation. Such years were 1876, 1878, 1882, 1884, 1886, and 1887; and the border trade was also largely increased by the requirements of the population of Broken Hill silver fields during 1887–8. The total imports and exports during each year since 1871 are given below.

Trade with South Australia.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1871	724,825	490,646	1880	690,407	830,256
1872	653,903	442,016	1881	692,781	454,764
1873	598,527	630,537	1882	1,017,685	1,085,194
1874	574,421	657,768	1883	841,109	969,083
1875	987,933	654,232	1884	1,002,174	1,502,366
1876	1,165,706	670,138	1885	890,335	810,953
1877	811,292	352,825	1886	828,174	1,585,830
1878	889,691	1,053,642	1887	1,259,758	1,740,517
1879	721,186	773,611	1888	1,831,436	1,661,446

Imports from South Australia.

The list of imports is a long one, but the principal articles were as follows :—

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Beer	13,831	13,495	11,850	18,855	45,552
Boots and shoes	5,406	8,451	14,483	21,002	16,788
Butter	6,332	6,396	3,561	7,171	25,545
*Coal and coke	.. ...	11,780	21,554	19,841	64,292
Copper (ore and ingots)	206,930	195,903	148,324	140,530	155,733
Drapery, wearing apparel, &c.	43,855	42,201	53,875	83,197	126,008
Dynamite, powder, arms, &c.	2,770	9,556	7,042	11,183	25,042
Eggs	......	......	2,044	7,982	20,978
Flour	299.274	219,320	172,299	308,805	296,199
Fruit (fresh)	3,833	1,879	2,485	4,178	12,592
„ (dried)	5,851	4,218	5,327	5,277	5,798
Furniture and upholstery	7,098	5,860	4,877	5.385	27,551
Gold (coin, bars, and dust)	7,980	22,449	37,647	20,886	11,269
Grain and pulse—					
Wheat	36,460	31,236	853	11,338	98,097
Others	18,008	18,407	8,110	28,103	41,704
Hardware	13,839	13,372	14,470	27,080	38,479
Hay and chaff	18,591	30,012	22,800	45,144	102,782
Iron and stell	22,685	22,750	25,446	59,402	109,448
Jams and jellies	15,740	10,799	10,041	11,784	10,799
Live stock	38,275	16,537	32,708	27,641	18,318
Machinery	12,451	12,497	15,396	37,339	69,482
Potatoes	13,521	5,826	6,039	8,204	10,713
Paper, books, stationery, &c.	3,185	2,726	4,028	5,446	12,192
Spirits	28,018	20,545	25,972	35,378	29,901
Sugar (raw)	15,403	12,284	14,445	16,804	20,754
Tea	7,729	6.628	8,712	14,547	13,875
Timber	12,975	12,876	17,311	70,514	113,503
Tobacco, cigars, &c.	6,460	5,570	7,238	12,079	14,666
Vegetables and onions	442	1,116	1,388	3,316	8,687
Wines	4,983	5,502	6,912	6,785	13,190

* Probably New South Wales produce re-exported.

The exports to South Australia are chiefly silver and lead, and wool; the values of the principal items for the last five years are given below:—

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Boots and shoes	10,327	10,472	7,409	7.468	3,439
Coal	97,072	74,535	73,063	62,715	51,370
Coin (gold)	3,000	6,000	39,000	17,000	41,000
Coke	79	400	4,557	5,098	18,410
Live stock	89,361	140,375	92,574	57,992	62,702
Silver ingots, lead ore	120,669	108,671	372,064	530,462	1,001,749
Skins	2,883	4,435	4,766	10,583	16,253
Wool	1,041,412	281,407	857,940	872,896	244,388

Overland trade with South Australia.

The records of the overland trade cannot be procured with exactness beyond the year 1876, but the time which has elapsed since the year named is amply sufficient to illustrate the great variations in the value of the exports. The import trade is much more regular, and until the year 1887 showed no great tendency to increase; in this year, however, a very marked increase is noticeable. This expansion is due to the requirements of the newly-found silver-fields of the north-west, and the imports from South Australia *viâ* Thackaringa amounted to £1,015,931 during 1888. It is anticipated that the extensions of the railway system of this Colony to the banks of the Darling at Bourke and Wilcannia will eventually divert not a little of the traffic which has hitherto gone to Adelaide. The certainty of speedy delivery, and the less amount of handling to which goods will be subjected, will probably more than compensate for the additional expense of delivery at the ship's side.

Overland Trade with South Australia.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	253,838	210,414	1883	404,322	782,552
1878	387,205	954,754	1884	360,965	1,287,44
1879	289,304	636,171	1885	386,252	617,606
1880	243,374	698,581	1886	442,034	1,396,4
1881	235,769	298,004	1887	713,238	1,513,2
1882	412,563	921,427	1888	115,924	1,359,8

Victoria displacing South Australia in N.S.W. markets.

The prominence which Victoria has assumed of recent years as a wheat-growing country, acts detrimentally to the trade of South Australia, for much of the breadstuff consumed in New South Wales, which was formerly obtained from Adelaide, is now procured from Victoria. The falling-off in this staple commenced about the year 1878, and is coincident with the development of the Victorian trade in flour and wheat, as will be seen from the following table, showing the value of wheat and flour imported from each of these colonies.

Wheat and Flour Imported from Victoria and South Australia.

Year.	Value of imports from South Australia.		Value of imports from Victoria.	
	Wheat.	Flour.	Wheat.	Flour.
	£	£	£	£
1870	76,397	123,958	20,758	33,986
1871	260,346	201,963	6,205	33,992
1872	105,523	205,042	7,833	7,715
1873	144,592	201,332	539	17,677
1874	141,675	230,251	1,423	4,180
1875	197,263	289,385	1,514	1,296
1876	187,444	295,371	902	2,188
1877	154,284	261,918	9,765	32,305
1878	116,089	251,246	34,401	153,126
1879	63,973	221,174	13,280	76,310
1880	42,340	263,546	43,249	126,142
1881	19,406	269,342	33,165	113,796
1882	62,117	321,127	23,680	194,823
1883	9,195	229,617	38,794	237,342
1884	36,460	299,274	23,907	216,546
1885	31,236	219,320	23,433	291,999
1886	853	172,299	57,729	384,037
1887	11,388	308,805	34,050	364,107
1888	98,097	296,199	103,173	284,928

TRADE WITH TASMANIA.

Trade with Tasmania.

The trade of New South Wales with Tasmania promises to develop into one of great importance, and its growth during the period comprised in the following table must therefore appear

Articles imported from Tasmania.

satisfactory. It will, however, be seen that the imports largely exceed the exports. The chief imports are tin, entirely for the purpose of re-export; green fruit, potatoes, and other agricultural produce. The principal articles of import worthy of note are as follows:—

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Bark	35,410	33,454	29,550	27,254	25,284
Chaff and hay	8,317	6,407	10,746	30	8,775
Fruit (green).........	75,695	87,193	93,722	68,742	60,853
Jams and jellies ...	55,080	46,877	33.760	28,182	23,877
Gold (bars and dust)	....	....	....	21,986	303
Live Stock—Sheep.	20,990	28,397	15,590	20,382	32,544
Oats	13,959	1,400	15,127	1,587	631
Potatoes	36,257	37,867	61,344	68,815	23,844
Tin—Ingots	261,792	293,251	297,736	304,507	306,824

Articles exported to Tasmania.

The export trade embraces a large number of articles, though only one, coal, reaches any considerable amount. The value of coal exported to Tasmania in 1888 was £20,755. The other exports consist of manufactured articles, chiefly the produce of Great Britain.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1871	107,002	23,049	1880	383,106	81,484
1872	103,018	54,993	1881	481,529	83,949
1873	128,770	36,044	1882	614,923	85,673
1874	145,865	52,127	1883	666,399	120,662
1875	167,870	44,274	1884	575,501	117,872
1876	207,075	53,484	1885	582,177	108,758
1877	374,393	57,168	1886	606,740	110,776
1878	286,343	75,453	1887	587,315	131,477
1879	188,064	82,842	1888	515,378	117,239

TRADE WITH NEW ZEALAND.

Trade with New Zealand.

New Zealand gave promise at a former period of being one of the leading customers of this Colony, but, from various causes, both the imports and the exports fell away very considerably. The trade lost has, however, been partly recovered, though the exports are still materially less than in 1879, as will be seen from the following figures.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1871	881,501	285,463	1880	460,735	525,174
1872	326,369	228,930	1881	471,911	427,295
1873	198,368	279,153	1882	737,204	454,853
1874	233,981	273,910	1883	583,056	358,627
1875	135,480	362,764	1884	881,530	506,714
1876	258,441	480,241	1885	899,623	369,055
1877	223,482	489,856	1886	949,567	427,640
1878	245,907	588,419	1887	757,076	300,937
1879	285,083	639,051	1888	788,003	393,288

Chief imports.

The imports consist chiefly of timber, agricultural and dairy produce. The value of the principal articles is given below.

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Butter	74,409	124,179	110,046	21,206	56,566
Cheese	13,308	19.908	30,350	3,638	11,998
Drapery, apparel, &c. ...	5,698	11,807	10,319	17,423	43,449
Flour	1,930	11,301	66,658	8,617	40,920
Gold, bars and dust	129,113	67,221	186,164	262,344	61,951
Grain and pulse—Wheat	25,305	40,876	86,608	3,476	87,155
Do Oats...	193,730	164,890	109,780	143,604	118,307
Do Other	59,220	46,247	46,657	33,355	47,126
Gum	14	351	199	800	22,694
Live stock	91,684	91,812	49,578	16,364	8,195
Malt	10,502	19,885	15,139	8,681	2,107
Meat (preserved)	7,423	22,984	11,643	6,299	15,084
Do Bacon, &c.	10,702	16,661	21,207	25,590	13,553
Oatmeal	9,082	13,876	9,101	8,849	9,077
Potatoes	67,804	43,244	25,874	30,247	47,110
Timber	100,667	101,237	83,966	83,692	81,403

Exports to New Zealand.

The value of the principal articles exported to New Zealand during each of the past five years was as follows :—

Description of Goods.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£
Coal	113,518	98,542	90,187	81,478	74,841
Coin, gold	145,000	100,000	215,000	87,000	190,000
Fruit, fresh	13,388	15,468	14,304	19,114	15,007
Manures	14,850	16,521	9,390	11,554	5,801
Timber	17,379	12,198	8,367	5,927	7,844

TRADE WITH OTHER BRITISH POSSESSIONS.

Besides the Australasian Colonies and Great Britain, the only other British possessions whose trade with New South Wales is at all considerable are Fiji, Hongkong, and India. With the Fiji Islands the trade is still valuable, though decreasing. In 1876 the imports from these Islands were valued at £29,610, and the exports at £71,477, being a total of £101,087, while in 1888 the imports had risen in value to £88,663, and the exports to £78,015, representing a total trade of £166,678. The imports in 1885 were valued at £192,540, so that there has been a marked decline since that year, while the exports were less in 1888 than in either of the past ten years, with the exception of 1887, and did not reach 32 per cent. of the figures of 1883.

Hongkong trade.

The import trade from Hongkong consists principally of opium, tea, tobacco, sugar, and rice, but large quantities of China oil, flax, hemp, and matting, as well as Chinese fancy goods, are also imported. The export trade for 1888 is chiefly composed of four items—coin to the amount of £179,435 ; coal, £26,868 ; bêche-de-mer, £6,286 ; and fungus, £17,119.

India trade.

The Indian trade has grown up almost entirely since 1880, in which year it amounted to only £20,264, increasing to £422,137 in 1884, though falling off greatly in the two following years, expanding again in 1887 to £321,067, but again declining in the following year. The figures given below show the value of imports and exports during each year since 1880:—

Trade with India.

Year.	Imports.	Exports.	Total trade.
	£	£	£
1880	653	19,611	20,264
1881	27,871	142,053	169,924
1882	72,739	345,312	418,051
1883	108,154	310,608	418,762
1884	128,185	293,952	422,137
1885	117,208	122,066	239,274
1886	100,905	89,299	190,204
1887	147,559	173,508	321,067
1888	208,989	42,791	251,780

Goods chiefly imported from India.

Castor oil is an article very largely imported from India, the value of oil received during 1888 being £30,389. There is also a large trade in woolpacks, the importations amounting to £81,554; and in bags and sacks, of which goods to the amount of £46,180 were received. The only other articles imported during 1888 in any quantity were rice, £9,484, and tea, £11,395. There were no importations of grain and pulse during the year, but the large development of wheat-growing of late years in India makes it not improbable that the importation of this cereal may be largely increased in the near future.

Export trade

The outward trade with India is confined almost entirely to coal and copper; of the former the export was valued at £20,593, and of the latter £15,240—the two items mentioned comprising a value of £35,833, out of a total export trade during 1888 of £42,791. The great falling-off noticeable since 1882–3 is due to the decline in the copper trade, and in the amount of gold coin exported, which, in the year 1882 was £242,258, and in 1883 £232,541.

Chief trade of Colony with Britain and dependencies

To what extent the trade of the Colony follows the British flag may be gathered from the following figures, which show not only the value of the trade of New South Wales with Great Britain and her dependencies during the past twelve years, but also the proportion which that trade bears to the whole.

Trade with Great Britain and British Possessions.

Year.	Imports from Great Britain and British possessions	Percentage of total imports.	Exports to Great Britain and British possessions.	Percentage of total exports.
	£		£	
1877	13,621,916	91·70	12,999,571	96·59
1878	13,694,884	90·66	12,650,708	96·34
1879	13,032,949	89·86	12,573,104	95·71
1880	13,021,783	91·85	15,210,314	97·00
1881	15,797,631	89·82	15,008,960	92·05
1882	19,269,165	89·73	16,470,481	93·18
1883	19,383,052	90·03	18,670,373	92·15
1884	20,942,254	90·42	17,221,650	92·69
1885	21,299,715	89·74	14,794,052	88·33
1886	18,813,492	89·70	14,088,846	90·58
1887	17,199,867	91·47	16,460,276	88·98
1888	18,691,052	89·49	18,448,083	88·13

FOREIGN TRADE.

Uniform increase of foreign trade.

The value of the trade of the Colony with countries other than those under British dominion shows a large increase since 1880, as will be at once seen from the subjoined table. The import trade is marked by a fairly uniform growth, while the export trade, though less regular, showed proportionately a more considerable increase. During 1881 the value of imports advanced £635,101, and the exports £826,357, an increase due mainly to the peculiar development of trade with the United States; while the large expansion found in the subsequent years arose from t

Foreign Imports and Exports.

establishment of direct trade with France, Belgium, and Germany. The total value of imports shows a large decline in 1887, which is chiefly due to a falling-off in the United States trade, though a sensible decline may be also observed in the imports from other leading foreign States, in 1888, however, the lost ground was to some extent recovered.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	1,230,862	458,329	1883	2,139,789	1,591,900
1878	1,409,761	483,697	1884	2,218,662	1,355,640
1879	1,470,877	558,827	1885	2,437,746	1,956,055
1880	1,154,280	472,488	1886	2,160,056	1,467,367
1881	1,789,381	1,298,845	1887	1,606,369	2,036,641
1882	2,200,734	1,206,874	1888	2,194,505	2,411,632

THE UNITED STATES.

United State largest foreign market.

The United States are the largest foreign markets of the Colony, the value of both the imports and exports far exceeding that of any other country. The import trade has been marked by a very uniform rate of increase, and during the years 1885 and 1886 exceeded £1,000,000. In 1887, however, there was a marked fall in the amount of the import trade, the value falling from £1,018,773 to £693,420, or nearly one-third, and although the figures for the following year show an advance they are still below those of 1886. The export trade has, on the other hand, been very variable. The largest increase in any one year was in 1881, when the exports amounted to £694,314 more than the previous year, the increase consisting almost entirely of gold, which was exported to the value of £647,323. Similarly, the increase in 1885 over 1884 is due to the same cause—the export of gold in former year amounting to £726,653.

Trade with the United States.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	481,565	108,273	1883	922,574	872,983
1878	622,261	128,805	1884	954,665	366,732
1879	546,630	211,206	1885	1,008,572	985,531
1880	387,056	172,648	1886	1,018,773	521,216
1881	587,865	866,962	1887	693,420	934,443
1882	886,171	676,598	1888	967,528	1,044,144

Class of goods imported from United States.

The imports comprise a large number of articles, amongst which the following are the most important, the values given being those for 1888 :—

Timber—undressed, dressed and worked up	£152,382
Hardware	86,796
Tobacco, cigars, &c.	43,480
Beer	18,409
Carriages, and carriage materials	34,431
Kerosene	82,310
Fish (preserved)	40,397
Watches and clocks	14,237
Machinery	72,227
Leather	25,325
Furniture	13,124
Agricultural implements	11,268

The other articles imported are mostly manufactured goods. In most years there has been a fairly large import of breadstuffs from the United States, and during 1886 the value of such imports was £96,216 ; in 1888, however, the value fell to £5,095.

Exports to America.

The exports to the United States are chiefly confined to a few articles of raw material, the produce of the Colony, the principal of which are gold, coal and shale, tin, wool, and kangaroo skins. No other goods are exported in considerable quantities. During the year 1888 the amount of export of the articles mentioned above was —

Gold, coin	£564,577
Coal and coke	282,700
Tin	92,336
Skins (chiefly kangaroo)	33,702
Shale	8,609
Wool	35,381

Large export of gold to United States.

For some years past there has been a considerable export of gold to America, the quantity sent away during 1885 being especially large. This export commenced in 1880, and the value of the precious metal both coined and uncoined exported since the year named was—

Gold Exported to America.

Year.	Value.	Year.	Value.
	£		£
1881	647,323	1885	726,653
1882	382,347	1886	229,137
1883	564,316	1887	651,612
1884	106,719	1888	578,488

The United States form one of the natural markets for the wool of the Colony; but, owing to the restrictions placed by the United States tariff upon its importation the trade in this commodity is extremely limited.

BELGIUM.

Trade with Belgium.

The direct trade between this Colony and Belgium began in 1881, and may, to a large extent, be attributable to the International Exhibition held in Sydney during 1879–80. In the year mentioned the combined imports and exports amounted to only £26,237, while in 1888 they had risen to £788,052, which cannot but be regarded as an enormous increase in so short a time. In point of value the Belgian trade of the Colony is larger than that of any other foreign country, the United States alone excepted, exceeding during 1888 that of Germany by £178,497, and that of France by £512,473.

Principal imports.

The goods imported from Belgium comprise a large number of articles. Iron in its various manufactures, and in bars, plate and wire, glassware, candles, drapery, cigars, cement, and starch are all imported to some extent, though the trade in each commodity is subject to considerable fluctuation.

Belgium a large purchaser of N.S.W. wool.

The outward trade with Belgium is confined almost entirely to wool, though some tallow is also exported. During 1888 the amount of washed wool sent to Belgian ports was 927,083 lb., valued at £48,428, and 22,307,007 lb. of greasy wool of the value of £670,680, or in all, wool to the amount of £719,108. Belgium is, therefore, next to Great Britain, the largest purchaser of New South Wales wool; for, though the export both to Victoria and South Australia exceeds that to Belgium, it is merely nominal, as very little of the wool is retained in these colonies for home use.

Trade with Belgium.

Year.	Imports.	Exports.
	£	£
1881	21,579	4,658
1882	39,951	21,659
1883	31,162	160,390
1884	74,904	326,488
1885	195,318	399,549
1886	173,831	424,938
1887	37,735	557,710
1888	64,766	723,286

FRANCE AND NEW CALEDONIA.

French trade.

The French trade has risen into importance since 1881, as will be seen by the subsequent table. The increase is due almost entirely to the establishment of direct communication between this Colony and the Republic by the Messageries Maritimes Company, but it has been accompanied by a corresponding falling off in the trade with New Caledonia, the chief dependency of France in the South Pacific. For though in 1881 the total value of French imports and exports amounted to only £65,833, as against £275,579 in 1888, those of New Caledonia fell during the corresponding period from £372,926 to £222,594.

Class of goods imported from France.

Wearing apparel and drapery form the largest class of imports from France; the imports of drapery and silk amounted in 1888 to £63,147; of apparel, £5,361; and of boots to £3,011. Next in importance are wines and spirits—the import of the former amounted to £16,474, and of the latter to £13,561. Oil to the value of £1,163; tobacco and cigars, £3,629; watches and clocks, £4,811, and toys, £6,046—are the only other goods largely imported. Large quantities of French goods are imported from Great Britain; but the indirect trade in these will probably soon be superseded by direct trade, and the cost of commission and double handling thus saved to the Colony.

Wool chief export to France.

Wool forms the chief export to France. The value exported during 1888 was £71,865. Tallow to the value of £10,083 was also exported.

Trade with France.

Year.	Imports.	Exports.
	£	£
1881	64,118	1,715
1882	98,176	9,744
1883	211,722	24,786
1884	218,755	183,890
1885	345,231	142,104
1886	216,193	149,509
1887	157,732	85,151
1888	154,856	120,723

New Caledonian trade.

As already pointed out, New Caledonia is an important market for the produce of the Colony, though its value has been considerably affected by the establishment of a regular communication between France and her dependency. The trade with New Caledonia reached its highest point in 1882, when produce was imported into New South Wales to the value of £273,370, and exported to the amount of £228,280. Since that year the imports and exports show a very considerable decline, as will be seen below.

Trade with New Caledonia.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	151,684	165,838	1883	152,096	212,528
1878	140,873	151,516	1884	107,509	210,552
1879	159,599	158,193	1885	82,181	153,094
1880	122,299	181,703	1886	64,952	111,332
1881	188,745	184,181	1887	70,676	137,212
1882	273,370	228,280	1888	68,637	153,957

GERMANY.

Trade with Germany.

A large trade has been maintained with Germany since 1879 when direct communication practically commenced, but the expor trade is still comparatively small and variable, though a rapi increase may be anticipated from the facilities afforded by the North German Lloyd's line of steamers now trading betwee Hamburg and Sydney. The following list shows the values of the principal articles imported from Germany during 1888. The only other articles besides these, of which the import was noteworthy, were paper and stationery, turnery, starch, and glassware :—

	£
Cement	8,850
Musical Instruments	52,073
Apparel, drapery, boots, &c.	96,999
Iron and iron manufactures, including hardware.	46,840
Spirits	36,719
Sewing machines	10,218
Tobacco and cigars	26,267
Beer	8,300
Fancy goods and toys	24,000
Watches and clocks	957

Wool chief export to Germany.

The exports consisted almost entirely of wool, the value o which, in 1888, was £115,553, out of a total export of £128,546 The remainder were chiefly ore and stone for treatment; quart being exported to the value of £3,646.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1879	32,436	4,775	1884	337,881	43,979
1880	47,169	......	1885	372,557	29,511
1881	124,910	11,993	1886	361,612	54,471
1882	180,951	11,661	1887	296,952	100,012
1883	213,709	7,947	1888	481,009	128,546

CHINA.

Trade with China.

The only other country whose trade with New South Wale reaches a large figure is China. The imports and export credited to Hongkong, however, belong in reality to the countr generally, and the diminution which is seen in the China trade since 1881, is to be attributed in no small degree to the transference of part of the trade from the ports of the Empire to Hongkong. Still, when allowance is made on this score, it will be found that the actual loss of trade is by no means inconsiderable. The main import from China is tea, and no perceptible decline is observable in the consumption of the article; but the total import has fallen off, owing to a decrease in the quantity required for re-export, and in this respect denotes a loss to the Colony. The direct export trade has never been large. Most of the goods intended for Chinese consumption pass through Hongkong, and do not appear as exports to China.

Small direct export trade.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	316,441	42,490	1883	259,108	21,351
1878	245,263	26,054	1884	357,208	21,741
1879	350,725	33,210	1885	303,595	21,114
1880	358,129	14,844	1886	195,930	16,462
1881	466,830	19,758	1887	251,722	14,510
1882	358,783	28,958	1888	309,934	7,651

TRADE WITH ALL COUNTRIES.

Total trade.

The amount of imports and exports of each country, in proportion to the total, during the ten years which closed with 1888, is shown in the following tables. As already pointed out, the border colonies of Victoria and South Australia appear more advantageously than their importance warrants, owing to the large amount of trade merely passing through their territory for shipment to Great Britain, while the trade to the last named country, as shown on the table, is less than the truth, by the amount thus over-credited to Victoria and South Australia.

Imports—Percentage of the Imports from each of the Principal Countries.

Year.	British Possessions.							Foreign States.						
	Great Britain.	Victoria.	Queensland.	South Australia	New Zealand.	Other Colonies or Possessions.	Total British Possessions.	United States.	France.	Germany	Belgium.	China.	Other Foreign States.	Total Foreign States.
1879	46·53	15·40	15·21	4·97	1·98	5·77	89·86	3·77	0·36	0·22	......	2·42	3·37	10·14
1880	46·11	15·42	15·70	4·87	3·25	6·50	91·85	2·73	0·27	0·33	......	2·52	2·29	8·15
1881	51·08	13·73	12·35	3·94	2·68	6·04	89·82	3·34	0·36	0·71	0·12	2·66	2·99	10·18
1882	51·96	12·90	10·01	4·74	3·43	6·69	89·73	4·14	0·46	0·85	0·18	1·67	2·97	10·27
1883	49·36	13·99	13·71	3·90	2·71	6·36	90·03	4·29	0·98	0·99	0·14	1·20	2·37	9·97
1884	49·32	13·23	12·88	4·33	3·81	6·85	90·42	4·12	0·95	1·46	0·32	1·54	1·19	9·58
1885	50·07	13·96	12·27	3·75	3·79	5·90	89·74	4·25	1·45	1·57	0·82	1·28	0·89	10·26
1886	49·81	13·30	12·24	3·95	4·53	5·87	89·70	4·85	1·03	1·72	0·83	0·93	0·94	10·30
1887	42·53	15·40	16·77	6·70	4·02	6·05	91·47	3·69	0·83	1·58	0·20	1·33	0·90	8·53
1888	44·11	11·83	15·00	8·76	3·77	6·00	89·49	4·63	0·74	2·30	0·31	1·48	1·05	10·51

Exports—Percentage of Exports to each of the Principal Countries.

Year.		British Possessions.						
		Great Britain.	Victoria.	Queensland.	South Australia	New Zealand.	Other Colonies or Possessions.	Total British Possessions.
1879	...	39·20	31·81	11·00	5·88	4·86	2·96	95·71
1880	...	47·98	29·19	8·70	5·30	3·35	2·48	97·00
1881	...	46·36	24·85	12·02	2·80	2·62	3·40	92·05
1882	...	41·35	21·40	17·04	6·15	2·57	4·67	93·18
1883	..	48·78	20·59	11·42	4·80	1·76	4·80	92·15
1884	...	41·36	22·45	12·85	8·08	2·73	5·22	92·69
1885	..	43·54	20·60	12·98	4·86	2·20	4·15	88·33
1886	...	38·74	23·76	10·73	10·20	2·75	4·40	90·58
1887	...	37·67	25·80	10·82	9·40	1·62	3·67	88·98
1888	...	40·63	26·15	9·17	7·96	1·88	2·64	88·43

Year.		Foreign States.						
		United States.	France.	Germany	Belgium.	China.	Other Foreign States.	Total Foreign States.
1879	...	1·60	0·17	0·03	...	0·24	2·25	4·29
1880	...	1·10	...	...	...	0·09	1·81	3·00
1881	...	5·31	0·01	0·07	0·03	0·12	2·41	7·95
1882	...	3·83	0·05	0·06	0·12	0·16	2·60	6·82
1883	...	4·30	0·12	0·04	0·80	0·10	2·49	7·85
1884	...	1·98	1·00	0·23	1·75	0·12	2·23	7·31
1885	...	5·88	0·85	0·17	2·40	0·12	2·25	11·67
1886	...	3·35	0·96	0·35	2·75	0·08	1·93	9·42
1887	...	5·05	0·47	0·54	3·01	0·08	1·87	11·02
1888	...	5·00	0·57	0·61	3·46	0·03	1·90	11·57

Valuation of imports.

For Customs purposes imports are, as a general rule, set down t their value in the Colony. Such, too, is the plan followed in gard to exports. Taking into consideration the circumstances of he Colony, the system is a just one; for, assuming that goods nported have to be paid for in goods exported, the imports, if alued according to the ruling prices at the port of shipment, ould be undervalued at the port of arrival by the amount of the eight and charges incurred. In order, therefore, to establish a air comparison between the imports and exports, each must be

Imports set down at Sydne value.

taken at the value in the Colony. Under normal conditions the value of the trade inwards and outwards should be virtually equal. If the freight-earning vessels were owned in the Colony the excess would be on the side of the imports, but as comparatively little of the tonnage is owned in New South Wales the freight earned is small. On the contrary, a certain quantity of goods must be exported to pay for the carriage of the goods imported, and the amount of such represents the difference in the value of the goods purchased by the exports, as they leave the country where they are produced, and the value of the same goods landed in this Colony.

Imports exceed exports.

The imports of the Colony, taken over a series of years greatly exceed the exports. The causes of this excess are chiefly two—the flow of British money to the Colony for investment, and the proceeds of loans floated by the Government for the purpose of carrying out public works. Were these importations to cease, the exports of New South Wales would exceed the imports; for, not only would the Colony be required to send out the value of the goods imported, with their freight to its shores, but also the amount of interest payable on loans, the earnings of money sent here for investment, and the incomes derived by persons living abroad, from property held in the Colony. Exact information has not been procurable on either of these heads, but some idea of the cause of the excess of imports may be gathered from the table given on page 160, showing the excess of imports in each year, and the amount expended from loans. It will be seen that during the past twelve years the aggregate excess of imports was not less than £26,884,069, while the expenditure from loans was £29,043,041.

TARIFF.

The tariff in force in New South Wales is more simple in character than that of any other important country, except Great Britain. At the close of 1886 it comprised specific duties on 175 articles, with an *ad valorem* duty of 5 per cent. on the remainder—certain articles, about 100 in number, comprising chiefly food, raw material, and agricultural appliances, alone excepted. Since then, however, the tariff has been greatly modified. The list of specific duties has been reduced to 65, and the *ad valorem* duties have been entirely abolished, the amended scale of duties coming into force on the 1st October, 1887. The chief articles from which Customs revenue is derived are fermented and spirituous liquors, tobacco, tea, and sugar. The revenue from spirits stood at 10s. per gallon until 1879, when it was raised to 12s., and in 1887 the duty was fixed at 14s. per gallon for ordinary and 15s. for perfumed spirits. The revenue derived from imported spirits during the past twelve years, was—

Customs Duties —Spirits.

Revenue from Imported Spirits.

Year.	Quantity on which duty was paid.	Duty.	Amount of duty collected.
	Gallons.		£
1877	1,012,806	10s.	506,403
1878	1,089,191	10s.	544,596
1879	1,031,989	10s. and 12s.	521,273
1880	999,744	12s.	599,847
1881	1,103,101	12s.	661,861
1882	1,154,720	12s.	692,832
1883	1,194,650	12s.	716,790
1884	1,239,495	12s.	743,697
1885	1,204,790	12s.	722,873
1886	1,161,628	12s.	696,977
1887	1,121,101	12s., 14s., 15s.	759,608
1888	1,178,293	14s. and 15s.	806,938

Colonial distilled spirits are subject to an excise equal to the duty on imported spirits. The revenue derived from this source is declining. In 1884, the quantity subject to excise was 17,709 gallons, on which £10,625 was paid. In the following year the quantity fell to 14,242 gallons, and the amount of excise to £8,545. In 1886 the quantity fell still further, being only 9,733 gallons, and the excise £5,846; but in 1887, notwithstanding the increased duty levied, the quantity subject to excise increased to 15,762 gallons, and the amount of duty to £10,754, and a still further advance of 17,111 gallons was made in 1888, the duty amounting to £11,978.

Spirits subject to excise.

Still wine is subject to an import duty of 5s. per gallon, and sparkling wine to 10s. per gallon. The import of the first named is less now than it was ten years ago, but owing to the increase in the duty in 1879 from 4s. to 5s. per gallon, the Customs revenue has been fairly maintained. The amount of still wine imported during 1888 was 156,628 gallons, on which £39,157 duty was paid. The quantity of sparkling wine on which duty amounting to £11,937 was collected was 23,874 gallons.

Australian wine checks import.

The growing favour in which Australian wine is held will probably have the effect of checking any considerable importations of foreign wine, and no large increase in the amount of duty, beyond that now received from such wine, can therefore be expected. The duty on sparkling wine was raised to 10s. per gallon in 1879, at which rate it now remains. The quantity imported shows a fair increase up to the end of 1885; but the recent general depression having probably limited the amount of money available for luxuries of this kind, the duty paid has of late years somewhat fallen.

Beer imported.

The import of ale and beer was larger during 1888 than in any previous year, reaching 2,413,226 gallons, of which 1,055,440 gallons were in wood, and 1,357,786 in bottle—the duty on the former being 6d. per gallon, and on the latter 9d. The total revenue derived from the import duty on beer during 1888 was £77,303. Amongst other alterations in the tariff was the imposition of an excise duty on beer made in the Colony. The duty is at the rate of 3d. per gallon, and was collected for the second half-year of 1887, and amounted to £63,565, the quantity on which duty was paid being 5,085,217 gallons; in 1888 duty amounting to £116,253 was collected on 9,300,209 gallons. As a set-off against the duty thus imposed, those levied on hops and malt have been removed.

Tobacco duty.

The duties levied on tobacco imported into the Colony during 1886 were, on the manufactured article, 3s. per lb.; on tobacco for manufacturing purposes, 1s. per lb.; on the leaf, 3s.; and on cigars and cigarettes, 6s. The excise on tobacco made in the Colony was 1s. per lb., and on cigars, 2s. 6d. The excise duty on manufactured tobacco was, however, increased during 1887, and now stands at 1s. 3d. The following table shows the revenue obtained from the import duties on this article.

Year.	Manufactured.		Leaf.		Unmanufactured.		Cigars.		Cigarettes.	
	Duty per lb.	Amount collected.	Duty per lb.	Amount collected.	Duty per lb.	Amount collected.	Duty per lb.	Amount collected.	Duty per lb.	Amount collected.
	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£
1877	2 0	23,251	1 0	57,483	......	Included with leaf.	5 0	21,798	......	......
1878	2 0	26,114	1 0	58,211	......	,, ,,	5 0	24,602	......	......
1879	2 0 2 6	27,236	1 0 1 3	38,326	.. ...	,, ,,	5 0	27,597	......	......
1880	2 0 2 6	24,824	1 0 1 3	43,555	......	,, ,,	5 0	29,017	......	......
1881	2 0	30,672	1 0	56,269	......	,, ,,	5 0	39,886	......	......
1882	2 0	31,113	1 0	52,762	......	,, ,,	5 0	44,782	......	......
1883	2 0	33,411	1 0	41,739	......	,, ,,	5 0	53,744	......	......
1884	2 0 2 6 3 0	44,248	1 0 3 0	15,889	1 0	*15,361	6 0	58,984	6 0	4,064
1885	3 0	50,240	3 0	1,567	1 0	33,624	6 0	65,889	6 0	8,962
1886	3 0	56,802	3 0	1,326	1 0	28,076	6 0	67,058	6 0	11,741
1887	3 0	75,603	3 0	1,052	1 0	27,611	6 0	63,799	6 0	13,373
1888	3 0	89,662	3 0	544	1 0	30,524	6 0	68,335	6 0	17,912

* Part included with leaf.

Excise on tobacco.

Excise duties were first levied on tobacco manufactured in the Colony in 1884, and the amount collected since then has been :—

1884	£68,000	1887	£127,545
1885	106,658	1888	128,898
1886	102,212		

The revenue derived from cigars has been trifling, reaching £1,000 in two years only, namely, 1887 and 1888, thus :—

1884	£490	1887	£1,284
1885	863	1888	1,038
1886	667		

It will be seen from the preceding table that the revenue derived from the imported leaf has steadily declined, its place being supplied by leaf grown in the Colony. To meet this falling off, the excise duty levied on colonial-made tobacco entered for home consumption was increased, as already stated, to 1s. 3d. per ℔. If the American leaf, which is subject to a duty of 1s. per ℔., were used exclusively in the manufacture of tobacco in the local factories, the actual duty paid on the finished product would have been, previous to the alteration in the tariff, 2s. per ℔., and 2s. 3d. since the alteration, as against 3s. for the imported article. Such, however, is not the case—large quantities of locally-grown leaf are used, and the absolute amount of duty paid on the tobacco made in the Colony was 1s. 3¾d. in 1885, 1s. 3¼d. in 1886, 1s. $5\frac{4}{10}$d. in 1887, and 1s. 6½d. in 1888.

Revenue from tea.

The duty on tea has remained at 3d. per ℔., and the amount of revenue per head derived from the duty has varied very little from year to year. The revenue received from this source for the last ten years was—

Revenue from Tea.

Year.	Amount.	Year.	Amount.
	£		£
1879	83,793	1884	100,053
1880	74,042	1885	98,915
1881	86,212	1886	105,979
1882	87,829	1887	106,815
1883	75,719	1888	100,617

Duty on sugar

Refined sugar coming into the Colony is subject to a duty of 6s. 8d. per cwt., but the quantity of this class of sugar imported is comparatively small, amounting to 206½ tons during

1888. Duty is levied on raw sugar at the rate of 5s. per cwt., but notwithstanding this duty, and the large area of the Colony adapted for sugar-growing, the imports are considerable. The question of sugar-growing in the Colony is discussed under the head of agriculture; but an inspection of the subsequent table, showing the amount of duty paid on raw sugar, will give a clear indication of the deficiency of production in the Colony during the last ten years.

Revenue from Raw Sugar.

Year.	Quantity.	Amount.	Year.	Quantity.	Amount.
	Cwt.	£		Cwt.	£
1879	269,312	67,328	1884	591,632	147,908
1880	228,172	57,043	1885	554,064	138,516
1881	187,548	46,887	1886	484,592	121,148
1882	182,356	45,589	1887	520,192	130,048
1883	203,496	50,874	1888	470,668	117,667

Duties on other articles.

Specific duties are levied on other articles besides those mentioned, to the number of 49, according to the tariff of 1887; the articles which yield most revenue being dried fruit, rice, explosives, bacon and hams, cheese, butter, candles, cement, coffee, fish, galvanized iron, iron wire, condensed milk, kerosene oil, opium, salt, and timber.

Ad valorem duties.

Ad valorem duties of 5 per cent. were re-imposed, as abovementioned, during 1886, having been abolished for nearly fourteen years. It was intended that they should be levied for a period of three years, but after remaining in force for eighteen months they were again abolished from 1st of October, 1887.

Customs revenue of various colonies.

Though more lightly taxed through the Customs, the revenue derived from this source is larger in New South Wales than in any of the other Australasian Colonies, with the exception of Victoria. During 1888, the revenue derived from the Customhouse, exclusive of excise, harbour dues, &c., in each Colony in Australasia was—

New South Wales...	£1,883,058
Victoria	2,353,050
Queensland...........	1,344,504
South Australia	533,665
Western Australia ...	£159,059
New Zealand	1,390,717
Tasmania	297,912

The amount of revenue collected by the Customs, including excise, during each of the last ten years, is given in next page.

Revenue collected by the Customs Department during the Ten Years, 1879–88.

Particulars of receipt.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£	£	£	£	£	£
Wines and spirits	557,062	641,911	709,832	745,491	768,792	808,045	786,545	752,070	815,844	866,894
Ale and beer	37,747	31,567	34,579	41,574	46,972	53,209	61,202	69,097	132,778	193,556
Tobacco	93,159	97,396	126,827	123,657	128,894	207,037	267,804	267,882	310,268	336,913
Tea	83,793	74,042	86,212	87,829	75,719	100,053	98,917	105,979	106,815	100,617
Coffee and chicory	9,067	10,983	10,610	10,850	10,638	13,406	13,549	13,188	13,127	10,664
Sugar	69,327	60,055	50,949	49,234	54,175	153,894	144,448	125,869	134,913	121,947
Methylated spirits	1,038	1,102	1,341	1,673	1,776	1,980	2,116	2,407	3,281	4,124
Opium	10,514	10,940	13,068	12,961	14,135	20,413	23,075	22,148	21,683	22,052
Rice	13,585	10,300	15,969	15,224	13,855	17,193	15,835	17,533	18,478	19,081
Malt and hops	13,281	13,390	15,753	18,939	17,266	18,304	20,410	30,366	13,424	......
Dried fruits	32,382	37,027	57,857	51,522	50,597	62,017	54,400	50,919	56,347	58,554
Specific duties	167,770	176,162	244,345	280,015	266,579	336,119	380,673	429,157	351,300	394,166
Ad valorem	......	......	......	......	......	......	......	277,227	226,743	3
Pilotage	18,005	14,462	20,463	26,455	30,508	32,124	31,739	31,716	28,628	36,797
Harbour and light rates	9,960	8,197	10,330	13,553	14,590	16,249	16,389	15,610	14,676	19,416
Removal dues	2,997	2,022	2,698	4,034	4,377	4,319	4,290	4,703	4,297	5,465
Tonnage and wharfage rates	......	6,974	14,177	8,909	7,096	7,895	7,396	6,973	7,059	6,945
Tax on Chinese	......	......	960	8,520	12,200	10,740	10,600	12,840	17,980	4,710
Bonded warehouse license fees	6,247	6,097	7,031	6,350	6,565	6,961	7,164	8,662	8,766	8,401
Miscellaneous receipts	1,346	1,289	2,064	2,573	3,220	6,363	5,741	6,629	5,070	3,969
Total	1,127,250	1,203,916	1,424,165	1,514,203	1,527,863	1,876,321	1,952,265	2,250,975	2,291,477	2,214,274

PART X.

Land and Agriculture.

Various system of land alienation.

THE systems adopted for the settlement of an industrial population on the lands of New South Wales have been many and widely different, according to the various stages of the Colony's progress and development. Commencing with grants, frequently of very extensive area, to military and naval officers and free immigrants, at a nominal rental of one peppercorn a year, the system was changed to that of sale, with or without competition. As the extent and value of the public domain became better known and appreciated, it was found absolutely necessary to legislate not merely for the day, but for the future. The question of land alienation was therefore approached in an entirely new spirit; the result being the passing of the Crown Lands Act of 1861, under the leadership of Sir John Robertson. Before this Act became law, the conditions of settlement rendered it difficult for men of small means to establish themselves with fair chances of success. The new measure aimed at facilitating the settlement of an industrial agricultural population, side by side with the pastoral tenants of the Crown, and, with this view, the Act introduced a principle entirely new to the land legislation of the Colony, namely, that of free selection, in limited areas, before survey. To this privilege was attached the condition of *bonâ fide* residence, and the land was to be sold at a fixed price, payable by instalments, or partly remaining at interest. The principle of unconditional sales was, however, maintained, and during the twenty-three years the Act of 1861 was in operation, there were sold 23,470,140 acres conditionally, and 15,572,001 acres by auction, improvement purchase, or otherwise without conditions; the total area alienated being 39,042,141 acres. In a very large number of cases the land

Crown Land Act of 1861.

selected, or purchased, reverted to the Crown, so that the abso area sold, or in process of sale, when the existing Act came force, amounted to only 32,819,023 acres, besides 7,338,539 a alienated previously to 1861.

CROWN LANDS ACT OF 1884 AND 1889.

Free selection before survey.

The Act of 1861 was, after many amendments, finally su seded by that of 1884, with the supplementary enactmen 1889. Though differing widely from the former Act in m important particulars these measures maintain the principl free selection before survey, but with one essential differe Under the original Act the whole area of the Crown la of the Colony was thrown open to free selection, and pastoral lands, held by tenants of the Crown, were not exem from the operation of the law. Thus were created consider difficulties between the two principal classes of settlers— squatters and the selectors. While maintaining the principl selection before survey, the aim of the Acts of 1884 and 1 was to give fixity of tenure to the pastoral lessees and obtai larger rental from Crown lands, at the same time restricting area sold unconditionally. The Act of 1884 became law on 1st January, 1885, and that of 1889 comes into operation on 1st of December of the present year.

Territorial divisions.

Under these measures the whole Colony is subdivided i three natural divisions, each of which is further subdivi into various land districts, and one or more such districts form local divisions, the administration of which is entrusted to a L Land Board, composed of a chairman and not more than assessors. In each land district resides a land agent, whose d is to receive all applications for land, in accordance with cert regulations having the force of law. The decisions of the L Land Boards may be appealed against to the Land Court sitt in Sydney. The creation of the Land Court was one of the pr cipal innovations introduced in the land legislation of the Col by the Act of 1889, and by its constitution and powers

Land Court

intended to free the administration of the law from political interference. This Court is composed of a President and two members appointed by the Executive, whose decisions in matters of administration have the force of judgments of the Supreme Court; but whenever questions of law become involved, a case may be submitted to the Supreme Court, either upon the written request of the parties interested or by the Land Court acting of its own accord. The judgments given on this appeal are final and conclusive. The conditions of alienation and pastoral occupation of Crown lands differ in each of the three divisions above named.

EASTERN DIVISION.

Boundaries and area.

The eastern division has an area of 60,452,000 acres, and includes a broad belt of land comprised between the sea-coast and a line nearly parallel thereto. This line starts from a point midway between the small settlements of Bonshaw and Bengalla on the Dumaresq River, on the northern frontier, and terminates at Howlong on the river Murray, and thus embraces the coastal district of the Colony, as well as the northern and southern tablelands. In this division lie all the original centres of settlement, and the markets of the Colony are more readily accessible to it than to the other districts. In it, moreover, is to be found some of the best agricultural land of the Colony. For these reasons, the conditions for the purchase and occupation of the Crown lands are more restricted than is the case in the central and western divisions; nevertheless, every person above the age of 16 may upon any part of the Crown lands not specially exempted from purchase, select an area from 40 to 640 acres in extent, together with a conditional lease of contiguous land, which cannot exceed thrice the area of the conditional purchase. The price demanded by the State is a uniform one of £1 per acre, 2s. per acre being deposited on making the application, and the rest paid by instalments of 1s. per acre per year, together with interest of 4 per cent. on the unpaid balance. The instalments begin at the end of the third year, though the whole of the balance may

Conditional purchases.

limited to a maximum of 320 acres, and no additional conditional purchase may be made except for such additional areas, which, together with that of the original purchase, do not exceed this maximum, and no conditional lease be granted. The property must be fenced in within twelve months after survey, the value of fencing not being included in that of the permanent improvements, which must be made within five years after survey, to the extent of £1 per acre. Moreover, the price demanded by the State has been fixed at £2 per acre, the deposits and subsequent instalments being likewise double the sum required to be paid in the case of ordinary conditional purchases. Lastly, no person under 21 years of age may select under this clause, and no person having already taken up a non-residential selection, may be permitted to make any other conditional purchase whatsoever under this Act.

Conditions of fencing and improvements.

Price per acre.

Special areas may also be reserved from the operations of the ordinary conditional purchase clauses of the Act, and may be thrown open to selection under different terms as to payment, and with or without the condition of residence. But, in such special areas, the price of the land cannot be less than £1 10s. per acre, if the selector elect to fulfil the condition of residence, non-resident purchasers being charged double the price demanded from the former, and the maximum area of one such purchase is fixed at 320 acres, in this division.

Price and limit of area.

CENTRAL DIVISION.

The central division of the Colony embraces an area of 55,460,000 acres, extending from north to south between the western limit of the eastern division and a line starting from a point on the MacIntyre River, where it is crossed by the 129° of east longitude, and following this river and the Darling to the junction of Mara [illegible] ence along that creek to the Bogan River, and across to [illegible] between the townships of Euabelong and Con- [illegible] n to Balranald, and thence to the junction [illegible] with the Murray, on the frontier of Victoria.

Boundaries and area.

The central division thus embraces the upper basin of the Darling River in the northern part of the Colony, and portions of those of the Lachlan, the Murrumbidgee, and the other affluents of the Murray. This territory has, hitherto, been mainly given over to pastoral occupation; but there is every warrant for supposing that agricultural and pastoral pursuits could successfully be carried on, side by side over a considerable part of it.

Limit of area, and other conditions.

Conditional purchases and leases.—In this division land may be conditionally purchased under the same terms as to residence, fencing improvements, price, and mode of payment as required in the eastern division; but the limit of an individual selection has been fixed at 2,560 acres, with a corresponding increase of the conditional lease to three times this area. The acreage which may be purchased without residence, as well as the conditions in regard thereto, are the same for the central as for the eastern division.

In *special areas* the maximum extent of a selection has been fixed at 640 acres in this division.

Western Division.

Limits and area.

The western division comprises the whole of the land situated between the western limit of the central division and the South Australian border. It embraces an area of 79,970,000 acres, watered entirely by the Darling River. This part of New South Wales is essentially devoted to pastoral pursuits. Water conservation, irrigation, and occupation, may in time counteract climatic conditions and irregular rainfall, and make agriculture possible over this large area, as its soil is adapted to the growth of any kind of crop. But legislation in regard to occupation and settlement of the district is based upon the assumption that for many years there will be little inducement for agricultural settlement. Therefore, conditional purchases, except in special areas, are not allowed in this division.

Pastoral leases.—Under the Act of 1884, the squatters, who had hitherto held runs under leases, which did not exempt the land from the operation of the free selection system, were invited to surrender their leases to the Crown, and submit to the subdivision of the unalienated portion of their runs into two equal parts. The one part was returned to the Crown lessee, under an indefeasible lease, for a fixed term of years, according to the geographical division in which the run was situated, while the remaining portion was leased under annual occupation licenses, renewable from year to year, remaining open for selection under the homestead lease clause. The Crown Lands Act of 1889 did not interfere with these provisions, but the tenure of pastoral leases, in the western division only, was fixed at twenty-one years at a rental without minimum upon an assessment made for seven years and a reassessment made every seventh year of the lease's currency, the term of twenty-one years being susceptible of extension for a further period of seven years if the land has been improved in a satisfactory manner. In the central division the term of pastoral leases extends to ten years, and in the eastern division to five years only; in each case the rent is determined by assessment, but no minimum is fixed. In the central division an extension of five years may be granted to the holder of a pastoral lease. Upon the expiration of a pastoral lease, the lands comprised therein may be re-let, or may be subdivided and let by auction, or tender, as a pastoral lease, or may be resumed by the Government, and all improvements on the land at the expiration of the lease become the property of the Crown, without compensation.

Pastoral tenure of land.

Expiration of pastoral lease

Occupation licenses.—Besides the leases for a fixed period thus granted to run-holders of half the unalienated portions of their runs, licenses may be granted to occupy resumed areas or vacant lands. In this case the application for such occupation license must be made at the time of applying for the pastoral lease, and a deposit made at the rate of £2 per section of 640 acres, part of which sum may be refunded when the license fee is fixed by the Minister, after appraisement. These occupation licenses are

Deposit and term.

granted only for a term of one year, and do not exempt the la from the operations of other clauses of the Land Act.

Homestead leases.—In the western division, homestead lea may be granted within the resumed areas or vacant lands. T portion which may be taken up under this clause cannot be l than 2,560 acres, or more than 10,240 acres. These leases granted upon application at the Lands Office and on payment o deposit equal to 1d. per acre of the area applied for. The applica must reside upon his lease for a period of at least six consecuti months during each of the first five years of his lease. Duri the first two years of occupation, the lessee must fence the wh of the lease, with a fence according to a prescribed design ; the Land Board may grant an exemption from fencing a natural or other boundary under certain circumstances, provid other substantial improvements are erected in lieu thereof. the expiration of the term of fifteen years, above mentioned, extension of seven years may be granted, if it appears to the La Board that the carrying capacity of the land has been improv or that the conditions imposed by the Act have been satisfactor fulfilled and the land benefited. At the end of the final term homestead lease may be again leased as such by auction or tend but the out-going tenant is not entitled to compensation improvements. Applicants for homestead leases are, howev required to pay for existing improvements on the land applied f at a valuation made under the direction of the Local Land Boa Holders of pastoral leases are not permitted to hold homeste leases, neither can any persons hold, or cause to be held on th behalf, more than one such lease.

Condition of occupation and fencing.

Term of lease.

Scrub leases.—Besides pastoral and homestead leases, otl leases are granted under the Act for special purposes. On recommendation of the Local Land Board the Minister m declare any Crown lands wholly or partly covered with scrub, noxious undergrowth to be scrub land, and such may be leased a term not exceeding twenty-one years, and in areas not exceedi

Minister may proclaim scrub lands.

10,240 acres, and not less than 640 acres to any person, subject to rental fixed by assessment. Every holder of a scrub lease is required to commence destroying the scrub within three months after the commencement of the lease, and take all such steps for this object as the Local Land Board may from time to time direct.

Limit of area and terms of tenure.

Lands covered with snow during part of the year may be leased in areas not less than 1,280 acres, and not exceeding 10,240 acres, for a term of seven years, with a right of extension for three years more, subject to an annual rental determined by the Local Board. Lands which, in consequence of their inferior character or isolated position, may not have been held under tenure, or have been abandoned, may be leased by auction or tender for a period not exceeding twenty years.

Leasing of snow lands.

Leases of inferior lands.

Upon application by the holder of a pastoral lease for permission to bore or search for water upon the land held under an occupation license, an area not exceeding 10,240 acres in one block on the resumed area may be temporarily exempted from sale or lease, and in the event of artesian water in sufficient quantity being discovered, the said area may be held under a fixed lease, the term of which may not exceed the currency of the pastoral lease.

Leases for the protection of artesian wells.

Annual leases are also granted for pastoral purposes in areas not exceeding 1,920 acres for any Crown lands, by auction or tender, at a minimum upset annual rental of £2 for every section of 640 acres.

Annual leases.

Residential leases may also be granted for periods not exceeding fifteen years, of areas not exceeding 10 acres of Crown lands within gold and mineral fields to holders of miners' rights and licenses, for the purpose of *bonâ fide* residence, upon such terms as may be prescribed as to rent, erection of fences, and buildings.

In addition to the various forms of alienation and occupation of the Crown lands described above, land may be sold in the three divisions of the Colony under the following provisions:—

Auction sales.—Crown lands, not exceeding 200,000 acres in the aggregate for the whole Colony in any one year, may be sold by

Sales by auction.

auction. The upset price for such land is notified by the Minis and is fixed by law at not less than £8 per acre for town la £2 10s. for suburban lands, and £1 for other lands. A dep equal to 25 per cent. of the purchase money is required, and balance must be paid within three months after the sale.

Purchases on gold-fields.—On gold-fields any person in d authorized occupation under the Mining Act may purchase portion so occupied, without competition, in virtue of the impro ments made on the land, at a price to be fixed by the Land Bo being not less than at the rate of £8 per acre for town lands, £2 10s. for suburban or other lands, or £2 10s. for any area than 1 acre; but the maximum which may be so purchased is quarter of an acre for town lands, and 1 acre for other lands.

Special sales.

Special sales, without competition, in the case of rescission water frontages, reclamation of land by proprietors of adjoin lands, and in other special cases, may also be made under conditi which are at the discretion of the Minister for Lands in the met politan district, and of the Local Land Boards in the other distri The Act also provides for special leases on the shores of the lakes, harbours or rivers, as well as for cutting and removing tim from Crown lands.

LAND REVENUE.

Revenue from Crown lands.

During 1888 the gross revenue received by the Treas amounted to £2,268,253. Of this sum £1,212,282 was deri from sales, both conditionally and otherwise, the details under e head being—

Revenue from Sale of Public Lands.

Auction sales	£207,052
Improvement and special purchases	86,913
Deposits on conditional purchases	102,905
Instalments on conditional purchases (inclusive of interest)	692,363
Balances on conditional purchases	100,980
Miscellaneous purchases	22,069
Total, land sales	£1,212,282

Pastoral occupation.

The annual land revenue derived from pastoral occupation was £917,190, distributed as under :—

Land under Pastoral Occupation, with Rent paid during 1888.

No. of Holdings.	Description.	Area.	Revenue obtained.
		Acres.	£
,613........	Pastoral leases	67,098,880	526,447
,495........	Occupation licenses	58,849,280	252,121
80	Special leases	5,760	22,554
92	Homestead leases.....................	3,767,680	27,266
14,497	Conditional and annual leases ...	9,779,840	87,896
......	Quit rents	....	906
	Total........................	139,501,440	917,190

In addition to the revenue derived from sales and pastoral occupation a sum of £95,347 was received from mining leases, miners' rights, mineral leases, and court fees ; and under the head of miscellaneous receipts, such as licenses to cut timber, fees on deeds, transfers, fines, &c., a further sum of £43,433 was obtained, making the gross total from all sources £2,268,253. This sum does not, however, represent the whole value of the proceeds from sales and occupation. On conditional purchases a deposit only of 10 per cent. is required, while on auction purchases 25 per cent. is paid immediately. The balance due under these heads during the year amounted to £886,309, so that the gross transactions of the Lands Department for 1888 may be thus summarised :—

Gross transactions during 1888.

Transactions of Lands Department during 1887.	Amount.
	£
Revenue received from Sales........	1,212,283
,, for Occupation..	917,190
,, under Gold-fields Act....................	95,347
,, Miscellaneous	43,433
Total revenue received	2,268,253
Balance due on conditional purchases made during the year......	740,529
,, auction sales made during the year.................	145,780
Total value of transactions during 1888... ..	3,154,562

Revenue received since 1861.

Since the year 1862, when the Lands Alienation Act of 1861 came into force, there has been received into the National Treasury from the proceeds of lands alienated the following sums :—

Description of Land Alienated.	Amount received.
	£
Lands sold in fee-simple, from 1st January, 1862, to 31st December, 1888	15,225,692
Deposits, interest, and balance of purchase money on lands sold conditionally from 1st January, 1862, to 31st December, 1888	13,361,118
Total amount paid into the National Treasury...	28,586,810

Amount due to the State.

At the close of 1888 there remained due to the State, on account of unpaid balances on land conditionally purchased, a sum of about £12,918,500 ; so that the total amount of sales from 1862 to the end of 1888 was over £41,500,000 in all. During the same period the area of land disposed of was 35,709,000 acres ; the average rate per acre for lands of all kinds sold was, therefore, £1 3s. 3d.

Alienated.

The total area of land sold in fee-simple, and for which deeds were issued to the close of 1888, was 22,676,612 acres ; the area granted was 3,113,393 acres ; and the area in process of alienation under the system of deferred payment was 16,593,144 acres, making a total of 42,383,149 acres; there remained then a balance unalienated of 153,499,001 acres. The area leased to pastoral tenants and others comprised 139,500,800 acres, so that out of the total available area of the colony, viz., 195,882,150 acres, there were either leased or sold 181,883,949 acres, leaving a balance of only 13,998,201 acres, representing chiefly the land reserved alike from sale and lease, as well as the area of country not suitable for settlement.

Area unalienated.

RURAL SETTLEMENT—HOLDINGS.

Holdings 1 acre and upwards.

Excluding land held by the tenants of the Crown, there were on the 31st March, 1889, 46,197 holdings of 1 acre and upwards in extent. Twelve years previously these holdings numbered

39,639. The increase amounted to 16·5 per cent., while the area comprised in the holdings advanced from 18,210,796 to 39,422,095 acres, or 116·5 per cent. There has been a very marked tendency to increase the area of individual holdings during the past ten years, and this tendency is visible during the whole period over which the records extend, as may be seen from the accompanying table. Since 1886, however, the reverse has been the case. This may be easily accounted for, as a result of the stoppage of the auction sales of Crown lands, which was one of the main features of the land policy inaugurated in 1861. The tendency to increase is again observable in 1889, probably owing to an augmentation in the number of large selections or consolidated holdings in the central district of the Colony, the number of holdings from 700 to 3,000 acres showing an increase during the past year of 208.

Increase in area of holdings.

Average Area of Holdings.

Year ended 31 March.	Average size of holding.	Year ended 31 March.	Average size of holding.
	Acres.		Acres.
1876	315	1883	772
1877	459	1884	817
1878	481	1885	813
1879	564	1886	862
1880	569	1887	817
1881	691	1888	798
1882	703	1889	853

The increase shown between the first and last years of the above series amounts to 538 acres, so that the average extent of holdings is now 171 per cent. larger than in 1876. This result is, in a certain measure, due to the facilities afforded by the improvement clause of the Crown Lands Act of 1861, and its subsequent amendments, permitting, as they did, the purchase at the rate of £1, and subsequently at £1 5s., per acre, in sections from 40 acres to 640 acres, of areas which pastoral occupiers had improved to the extent of £1 per acre. But it is attribu-

Facilities afforded by Act of 1861.

Total alienation.

table also, and in a large degree, to the vast areas of Crown lands offered for sale at public auction, which almost invariably fell into the hands of the Crown tenants on whose runs they were situated. Up to the close of 1882, when a check was first given to this form of alienation, there had been disposed of by public auction 10,995,120 acres, whilst the area acquired under the improvement clause amounted to 2,305,938 acres. At the date above mentioned, a total area of 35,478,346 acres had been alienated throughout New South Wales, of which 29,113,246 acres were sold subsequently to the Act of 1861, and of this area 13,301,058 acres, or a little more than 45 per cent., were parted with under the auction sales and improvements clauses, in the proportion of nearly five acres sold at auction to one bought under the improved purchase clause.

Comparative size of holdings in the various electorates.

The next table shows the average area of holdings in various electorates, and it will be seen that in the Riverina district the average sizes of holdings reach the largest figures, being 8,410 acres in the newly proclaimed electorate of Sturt, 6,465 acres in that of the Murray, 5,898 acres in the Balranald, 3,772 acres in the Murrumbidgee, 2,478 in the new electorate of Wentworth, and 2,017 in the Hume electorates, or a mean of 4,840 acres for the whole district. The electorates of Gunnedah, Bourke, and the Gwydir, closely follow, with the respective averages of 4,535 acres, 2,093, and 1,919 acres.

Small area of holdings in early settled districts

In the semi-pastoral and semi-agricultural districts of the central division of the Colony the average size of the holdings is much smaller, Grenfell, Queanbeyan, and Monaro averaging 1,483, 1,012, and 1,115 acres respectively. In the eastern division, and in that part of the Colony which was first settled, comprising the valleys of the Hawkesbury, Nepean, Hunter, and Shoalhaven Rivers, and the country around Goulburn and Bathurst, the area of holdings becomes further reduced, and, immediately around the centres of population, the average becomes still smaller. Thus in the electorates of Argyle, East and West Macquarie, Orange, Patrick's

Plains, and the Richmond and Eden, the averages lie between 730 and 318 acres, while, in those of Kiama, Hawkesbury, Central Cumberland, and Goulburn, they fall to between 120 and 35 acres. The Upper Hunter is an exception, as the average size of holdings there reaches the high mean of 1,295 acres. The high average of the electorates of Tamworth and Gloucester is owing to the fact that the freehold estate of the Australian Agricultural Company, originally of 1,000,000 acres, is mainly comprised within the limits of these electorates.

Average area of holdings.

Average area of Holdings in the various Electoral Districts in the year 1887–88.

Electoral Districts.	Area.	Electoral Districts.	Area.
	Acres.		Acres.
Albury	515	Macleay	169
Argyle	674	Macquarie East	376
Balranald	5,898	,, West	417
Bogan	1,513	Maitland East	165
Burrowa	914	Molong	648
Bourke	2,093	Monaro	1,115
Braidwood	438	Morpeth	88
Camden	256	Mudgee	356
Carcoar	626	The Murray	6,465
Clarence	133	The Murrumbidgee	3,772
Central Cumberland	53	The Namoi	1,748
Durham	403	The Nepean	195
Eden	412	Newcastle	203
Forbes	1,193	New England	929
Glen Innes	752	Northumberland	220
Gloucester	1,643	Orange	363
Goulburn	35	Patrick's Plains	730
Grafton	237	Queanbeyan	1,012
Grenfell	1,483	The Richmond	318
Gundagai	1,263	Shoalhaven	211
Gunnedah	4,535	Sturt	8,410
Gwydir	1,919	Tamworth	1,157
Hartley	337	Tenterfield	335
Hastings and Manning	191	Tumut	533
Hawkesbury	114	Wellington	643
Hume	2,017	Wentworth	2,478
Hunter	207	Wilcannia	707
,, Upper	1,295	Wollombi	198
Illawarra	130	Yass Plains	797
Inverell	643	Young	868
Kiama	120		

Comparative increase of holdings.

Comparing the number of existing holdings of various sizes with those of the year 1880, when the particulars were first recorded, it will be found that those under 15 acres have increased 38·5 per cent.; those from 15 to 200 acres have been stationary. Between 200 and 400 acres the number of holdings shows a very small increase; those from 400 to 1,000 acres increased 36 per cent.; from 1,000 to 2,000 acres the increase was 72 per cent.; from 2,000 to 10,000 acres it was 89 per cent.; while in the largest class of holdings, from 10,000 acres upwards, the increase in number has been over 77 per cent. during the nine years. The subjoined table shows the number of holdings in various classes in each year of the period named.

Holdings of Various Sizes.

Acreage.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Under 15 acres	4,974	5,550	5,186	5,124	5,154	5,409	5,877	6,512	7,038	6,889
15 to 200	21,302	20,645	20,361	20,007	20,161	20,998	21,167	21,288	21,651	21,503
200 to 400	6,199	5,854	5,753	5,760	5,969	6,363	6,285	6,382	6,481	6,612
400 to 1,000 ..	4,964	4,833	4,959	5,559	6,031	6,497	6,617	6,792	6,778	6,750
1,000 to 2,000..	1,212	1,467	1,470	1,550	1,667	1,886	1,811	1,948	2,010	2,089
2,000 to 10,000	940	1,229	1,176	1,297	1,350	1,413	1,406	1,458	1,618	1,774
10,000 and upwards..	327	414	449	463	461	513	563	552	566	580
Total	39,918	39,992	39,354	39,760	40,793	43,079	43,726	44,932	46,142	46,197

Holdings in vicinity of towns.

The holdings under 15 acres in extent are, generally speaking, in the vicinity of towns, and consist mainly of gardens or orchards, and the increase of 39 per cent. is what would naturally be expected from the increased demand for their produce by a large population. The least satisfactory feature in the table is the stationariness of the number of holdings of moderate size. In 1880 the total holdings having an area from 15 to 400 acres, amounted to 27,501, and in 1889 to only 28,115, showing a very slight advance. On the other hand, the larger holdings have increased to a remarkable degree, so that, at the close of the year 1888 there were 11,193 holdings of 400 acres and upwards in extent, compared with 6,938 in 1878, or an increase of 61 per cent. in number in that short period. The figures relative to the number and extent of holdings over 10,000 acres in area are still more remarkable, as they show that at the end of 1888 there were 580 holdings of more than 10,000 acres each, comprising together 20,972,187 acres, so that the average area of these estates was 36,159 acres. This large extent of territory forms about 53 per cent. of the occupied lands, exclusive of what is held under lease by the tenants of the Crown, and represents about half the entire alienated lands of the Colony. This enormous area is in the hands of only 580 occupiers. It has not been found possible to determine the number of holdings exclusively upon lease for the present year, nor their average extent; but an inspection of the returns is sufficient to show that the bulk of the leaseholders occupy farms of less than 200 acres.

Total area in cultivation.

The proportion of the total land alienated which is occupied for agriculture is but small. The cultivated land amounts to 999,298 acres, or only one-half per cent. of the whole area of the Colony, and 2·5 per cent. of the land sold. By far the greater portion of cultivated land is to be found in the smallest class of holdings, the cultivation in estates of between 1 and 500 acres amounting to 654,166 acres, or about two-thirds of the total area under crop. On estates between 500 and 1,000 acres, 150,334 acres have been tilled. Of the remaining cultivated land, 153,545 acres are on estates of 1,000 to 10,000, so that the area under crop on estates of over 10,000 acres in extent is insignificant.

Enclosed land.

The area of unenclosed land in 1876 amounted to nearly two-fifths of the whole area of the holdings; but, in the beginning of 1889, the proportion had fallen to considerably less than one-twelfth, the area unenclosed at that period being only 2,951,124 acres out of a total of 39,422,095 acres occupied. This result is due partly to the operation of legislation, and partly to the saving of labour which fencing enables occupiers to effect.

SOIL AND AGRICULTURE.

Soils adapted for the produce of many climes.

There is found in the Colony of New South Wales so gre
variety of soils and climate that almost any kind of crop, whe
specially the produce of temperate, and even cold climates, o
sub-tropical regions may be grown. The nature of the soil va
greatly, according to the geological formation in different part
the Colony; but, except in the inaccessible or rugged portion
the mountain chains, and the more arid portions of the no
western districts, the soil is almost everywhere susceptible
cultivation. The area absolutely unfit for occupation of any
has been roughly estimated at less than 5,000,000 acres, an
may be said that the greater part of the area adapted for settlem
is also in some form or another capable of being cultivated.
question of the success of agricultural operations in New So
Wales is, however, altogether independent of the mere fitnes
the soil for cultivation. So far, experience has shown that
irregular rainfall and a want of uniformity in the seasons, wh
are the chief characteristics of the climate of a large part of
interior, are a great drawback to the success of agricult
settlements. Hitherto the principal industry of the Colony
nected with its soil has been its occupation for grazing, and
pastoral interest has absorbed the energy of the colonists to so gr
an extent that agricultural pursuits have been in no slight deg
neglected. Such neglect must necessarily be corrected in time,
there is every indication that the question will soon receive am
attention.

Rich soil of coastal valleys.

The portion of the valleys of the coastal rivers adapted
agriculture, owing to the confined nature of their basins, is limit
but nowhere could there be found richer soil than along the lo
reaches of these rivers. The brush lands of the Tweed, Richmo
Clarence, Macleay, and Manning are proverbial for the richness
their soil, and the sandy alluvial formations of the Hunter and
Hawkesbury valleys have been cultivated for nearly a hund

years without rest, being enriched periodically by fluvial inundations. The valleys of the southern rivers of the coast district are not less rich, and along the banks of the Shoalhaven, Clyde, Tuross, and other streams are found unmistakable evidence of thriving industry.

The variety of climate experienced in a region extending through 8 degrees of latitude, from 29 degrees to 37 degrees south, of necessity causes a corresponding variety in the kinds of produce which may be successfully grown.

Localities where principal crops are grown.

Maize is grown in almost every part of the coastal region, along the river valleys, especially north of Sydney, and yields an abundant return. Sugar-cane is cultivated only on the northern rivers, very little being raised southward of the Macleay. Wheat is grown in the Hunter valley to some extent, but not in the country further north. In the southern district, although the little wheat raised shows a comparatively high return, the extent of land cropped is too small to enable a reliable inference to be drawn as to the true capabilities of this rich district. The climate of the northern coast is particularly favourable to the growth of semi-tropical products, especially sugar-cane, coffee, and tobacco, and in the Hunter valley the vine finds a natural home.

Soil suitable for fruit-trees.

The soil of the coastal region is almost everywhere suitable to the growth of fruit-trees, both semi-tropical and European. Oranges, lemons, shaddocks, and other varieties of this class, thrive well on all parts of the north coast, and nowhere better than in the Wianamatta formations about Parramatta, and in the valleys of the Hawkesbury, Nepean, and Parramatta Rivers. The cultivation of these fruits, as well as that of grapes for the table, peaches, apricots, and other varieties of European fruit, is indeed the principal industry of the agriculturists in the vicinity of the metropolis; and in many places where the soil is not adapted to the growth of cereals, fruit-trees succeed well, and handsomely repay the cost of cultivation.

Suitability of table-land for European cereals.

On the high plateau of the Great Dividing Range a variety of soil is also met with, and there is much rich agricultural country, especially suited for the cultivation of wheat, barley, oats, and other agricultural products of cold and temperate regions. Notwithstanding the drawbacks in the shape of uncertain seasons and variable rainfall, the results obtained in the cultivation of cereal crops in the rich soils of the Monaro, Tumut, Bathurst, Wellington, Mudgee, and New England districts, on the mountain plateaux, are certainly encouraging.

Alluvial deposits.

In the western division of the Colony the alluvial deposits extending along the course of the great rivers which carry the drainage of the larger portion of the Colony of New South Wales to the waters of the Murray, have formed a soil of excellent quality, and the cereals which form the more considerable items in the sustenance of mankind might be grown in immense quantities were the rainfall more abundant and regular. Attempts have been made on small patches of country here and there to test the agricultural qualities of the soil, with the result that in years of abundant and regular rains the crops have been magnificent, but in times of drought the returns have been as scanty as in favourable seasons they have been plentiful. Notwithstanding this drawback, the cultivation of cereals in the Murray and Murrumbidgee valleys is greatly on the increase, and in no other part of New South Wales can there be noticed a greater advance in agricultural settlement, except perhaps in the Richmond and Clarence district, bordering the north coast of the Colony. It may be confidently asserted with regard to the Riverina, that wherever it may become practicable to conserve water, or to establish an intelligent system of irrigation, the soil will repay with a bountiful harvest the labours of the agriculturist. Over what area systematic irrigation may be carried on has not yet been ascertained, though possibly this may not prove to be very considerable, owing to the comparatively small volume of the rivers whence the water must be obtained, and the irregularity of their flow. The physical formation of

Practicability of irrigation.

South Wales has been described elsewhere. It will have noticed that it differs greatly from any other country where icial irrigation has been practised on a large scale, and that the nce of mountain ranges capped with perpetual snow, forming ral and inexhaustible reservoirs, is a marked peculiarity of ountry.

CULTIVATION.

he area of New South Wales under cultivation during 1888 unted to 999,298 acres. This however includes 200,332 acres rtificially sown grasses, so that the area under crop, properly alled, was 798,966 acres. Owing to the drought which unfor- tely afflicted part of the Colony during 1888 the area cultivated less than in the previous years, the falling off amounting to 00 acres. The following table shows the progress of agricul- since 1877 :—

Year ended 31st March.	Total number of acres in crop.	Per inhabitant.
	acres.	acres.
1877	513,840	0·84
1878	546,556	0·85
1879	613,642	0·91
1880	635,641	0·89
1881	710,337	0·96
1882	645,068	0·83
1883	733,582	0·90
1884	789,082	0·92
1885	852,017	0·94
1886	868,093	0·91
1887	977,664	0·97
1888	1,048,305	1·00
1889	999,298	0·92

he principal crops grown in the Colony are wheat, maize, oats, ley, potatoes, sugar-cane, tobacco, grapes, oranges, and other its. The quantities produced in the year ended 31st March, 9, and the value of each crop is given in the following state-

Quantities and value of produce.

ment, the values being the average for the whole Colony time the harvest was gathered :—

Principal Crops cultivated.	Area.	Produce.	V
Cereals :—	acres.	Bushels.	
Wheat	304,803	1,450,503	30
Maize	166,101	4,910,404	79
Barley	3,318	36,760	
Oats	7,984	109,931	1
Other grain	985	12,899	
[illegible]	15,281*	110,218	6
Tobacco	4,833	Cwt. 55,478	12
Grapes for wine and brandy	3,596	Gals. 805,813	16
,, table use	3,476†	Tons. 2,527	7
Oranges	10,851	No. of Doz. 19,693,880	20
Market garden produce	4,516	....	11
Orchard produce	16,311	....	1,46
Minor crops	3,490	3,490	1
Permanent artificial grasses	200,332	....	.....
Total £	999,298	....	4,41

NOTE.—The values given are those at the places where the produce was gro

* Including 10,284 acres unproductive.

† Including 1,971 acres vines as yet unproductive.

WHEAT.

Principal centres of cultivation.

In the early days of settlement the Hawkesbury River Valley and the country adjacent to the towns of Parramatta, Liverpool, Penrith, Camden, and Maitland were the centres of considerable wheat growing. Unskilful farming, and the consequent exhaustion of the soil, with the attendant evils of rust, smut, and other diseases, caused these districts to be abandoned little by little as wheat country, and on the discovery of the Bathurst Plains their importance at once ceased. The districts of Bathurst, Goulburn, Gundagai, Tumut, Young, Monaro, and New England were each in turn occupied by agriculturists, and the suitability of their soil and climate, as well as that of the whole of the mountain plateau, for the growth of this cereal became definitely established.

Cultivation very irregular.

The cultivation of this grain during the past thirty years has been very irregular. For some years prior to 1867 the area of land under crop remained almost the same from year to year, being little more than 125,000 acres. In 1867, however, the wheat area had increased to 175,000 acres, and at that acreage it remained practically unaltered for twelve years. Then, again, more land was laid under wheat, and in 1878–9 the area had increased to 233,252 acres. Since then the area of land under this cereal has been greatly extended, and during the year 1887–8 there were reaped 389,390 acres, an area larger than in any previous year; and an increase of 51,660 acres, or 15·29 per cent. above the area under this grain crop in 1887. During 1888–9 the area under wheat for grain fell to 304,803 acres, and owing to the severity the season much of this area was not reaped, as the poorness of crop would not pay the farmers to harvest it. The total pro- ction of the wheat fields of the Colony amounted to only

Average yield

1,450,503 bushels, equal to an average of 4·75 bushels per acre, which was the smallest return ever experienced in New South Wales. The average yield during the whole of the period, which extends from the date of the passing of the first Crown Lands Act to the season which ended on 31st March, 1889, was 12·88 bushels, the lowest yield being 4·76 bushels, obtained last season, as stated above, the most bountiful, 17·37 bushels per acre, gathered during 1886-7. During the first ten years of the period named, from 1862 to 1871, the yield per acre appears to have been comparatively a small one, having averaged only 10·70 bushels. Thence followed a period of fair seasons, extending over seventeen years, when the average fluctuated between a minimum of 10·45 bushels obtained in the season of 1875-6, and a maximum of 17·37 in the season 1887-8, averaging 14·93 bushels per acre for the whole of that period.

Season of 1889-90.

The prospects of the coming season, 1889-90, do not appear so encouraging as might be desired, the winter of 1889 having been so far a remarkably wet one, especially along the coast, and throughout the principal wheat districts of New South Wales. Early-sown wheat is likely to suffer from this cause; the late crops may, however, benefit much from the heavy winter rainfall should the state of the weather modify as the year advances. Such a wet season as the present is almost as abnormal as the extreme drought of 1888, but the farmer has much more to fear from drought than flood, and the experience of the past shows the necessity of conserving, wherever possible, the water which rain-clouds supply in so irregular a fashion.

Influence of rainfall.

The influence of the rainfall, however, can hardly be shown by means of figures. There are too many considerations affecting the value of rain to admit of this being done. The period of the year at which rain falls, the quantity falling at any one time, and evaporation, are elements of as much importance as the total nfall. The following statement shows the state of wheat cultiion since the year 1862:—

Area under Wheat—Yield per Acre.

ear ended 31 March.	Area of crop.	Bushels.	Yield per acre.
	Acres.		Bushels.
1862	123,468	1,606,034	13·01
1863	108,136	1,054,954	9·75
1864	103,242	808,919	7·78
1865	104,568	1,246,458	11·92
1866	131,653	1,013,863	7·69
1867	175,033	2,226,027	12·72
1868	149,142	1,433,807	9·61
1869	164,206	1,887,085	10·88
1870	189,452	3,200,959	16·89
1871	147,997	999.595	6·75
1872	154,030	2,229,642	14·48
1873	177,551	2,898,463	16·32
1874	169,330	2,238,414	13·43
1875	166,911	2,148,394	12·87
1876	133,609	1,958,640	14·66
1877	145,608	2,391,979	16·43
1878	176,686	2,445,507	13·84
1879	233,252	3,439,326	14·74
1880	233,368	3,613,266	15·48
1881	253,137	3,717,355	14·69
1882	221,887	3,405,966	15·35
1883	247,361	4,042,356	16·35
1884	289,757	4,345,437	15·00
1885	275,225	4,271,394	15·52
1886	264,867	2,733,133	10·45
1887	337,730	5,868,844	17·37
1888	389,390	4,695,849	12·06
1889	304,803	1,450,503	4·75
Average yield for twenty-eight years..... ...			12·88

Dividing the quarter century ending with March, 1889, into inquennial periods, the yearly averages were—

Average yield for twenty-five years.

Quinquennial period.	Average yield per acre.
1865–1869	10·56 bushels.
1870–1874	13·57 ,,
1875–1879	14·51 ,,
1880–1884	15·37 ,,
1885–1889	12·03 ,,

Various district compared.

The increased yield of the period since 1874 is partly due to improved farming; but, at the same time, it must not be lost sight of that the occurrence of rust, smut, and other forms of disease in wheat has been less frequent and less general of recent years. Grouped according to the proportion of land under wheat during 1887 and 1888 to the total area, the districts stand as follows:—

Proportion of Land under Wheat in chief Districts compared with total area.

District.	Proportion of land under wheat to whole area of district.	
	1887. Acres.	1888. Acres.
Young	1 in 38	1 in 41
Gundagai	42	48
Orange, Molong, and Carcoar	60	80
Bathurst	57	99
Yass and Burrowa	136	223
Murray Valley	109	125
Tamworth	152	252
Mudgee	197	194
Goulburn	181	471
Murrumbidgee	224	229
Wellington and Bogan	573	617
Tumut	429	538
Monaro	421	825
Hunter Valley	599	902
New England	557	1,295
Glen Innes, Inverell, and Tenterfield	607	1 025
Forbes and Grenfell	804	1,428
Namoi and Gwydir Valleys	2,820	4,013

Area of wheat cultivation in districts.

The area of land under wheat in the remaining districts of the Colony is so small as not to be worth taking into consideration, and is therefore neglected in the ensuing comparisons. Owing to the alteration of the boundaries of the electoral districts in 1881, comparison by electorates is not possible beyond that year. Taking, therefore, the eight years which have since elapsed, the total area under wheat in each district was—

Area under Wheat, in Acres.

Districts.	1881-2.	1882-3.	1883-4.	1884-5.	1885-6.	1886-7.	1887-8.	1888-9.
Goulburn	8,636	9,598	9,452	9,289	5,661	7,787	9,126	3,505
Yass	10,808	12,552	15,732	14,824	12,701	16,824	17,596	10,745
Wellington and the Bogan	8,321	10,463	12,722	12,700	11,153	20,170	17,722	16,445
Monaro	9,832	10,253	10,917	10,922	7,072	9,892	13,466	6,880
Murray Valley	38,928	38,705	45,493	45,792	50,097	54,240	74,080	64,548
Orange	37,429	45,045	52,294	47,890	45,564	59,721	55,033	41,157
Gundagai	9,150	12,004	15,390	15,412	18,438	20,108	24,253	20,998
Forbes	5,215	5,858	9,285	8,156	7,775	11,558	12,545	7,063
Murrumbidgee	5,638	4,357	13,143	11,799	19,793	26,204	46,309	45,254
Tamworth	10,600	11,750	14,275	12,644	12,838	16,543	16,179	9,737
New England	6,294	7,687	7,836	7,486	6,201	7,047	8,186	3,524
Namoi and Gwydir Valleys	3,180	3,226	3,436	3,617	4,114	5,485	5,989	4,209
North Coast	471	547	531	503	270	218	288	302
Glen Innes	7,428	8,771	8,321	9,465	8,241	8,789	10,401	6,152
Young	13,316	16,750	21,964	18,978	21,582	28,609	34,119	31,891
Hunter River Valley	9,012	8,058	8,288	7,750	6,499	8,326	8,235	5,479
Bathurst	23,834	25,573	21,456	20,269	12,858	18,817	18,889	10,736
Mudgee	8,283	9,851	12,163	11,586	10,125	12,749	11,511	11,705
Tumut	2,660	3,283	3,698	2,926	2,185	2,739	3,405	2,720
South Coast	383	359	364	261	141	138	152	164
Hawkesbury and Nepean	2,338	2,274	2,763	2,797	1,333	1,597	1,351	1,273
Western Districts	115	214	230	159	220	166	551	312

Agriculture gaining ground

The foregoing figures are instructive, as they throw considerable light upon the history of wheat cultivation and agricultural settlement in New South Wales. Although the interval under examina-

[illegible]

tion is a short one, extending over a period of eight years onl great changes are shown to have taken place in parts of th country hitherto devoted mainly to pastoral occupation. It is al interesting to note that agriculture is gaining ground in tho districts where the greater number of the huge freehold estate accumulated by pastoralists under the auction sales and improv ment clauses of the Land Act of 1861, are situated. It is in th valleys of the Murray, the Murrumbidgee, and the Lachlan th the struggle between squatter and selector has been fiercest, an where the most remarkable increase of agricultural settlement regards wheat-growing and agriculture generally has been e hibited. The following statement, showing the total area of lan under crop in the districts abutting on the three great rivers abov mentioned, in the years ended March 1882 and 1888 respectivel will serve to illustrate this point. The year 1889 is left out consideration, as being altogether abnormal.

Districts.	Total Area under Cultivation.	
	In 1882.	In 1888.
	Acres.	Acres.
The Murray	55,763	93,961
The Murrumbidgee	13,045	59,096
Forbes	12,429	18,223
Gundagai	13,295	28,269
Yass	16,194	24,200
Young	21,132	42,224
Total	131,858	265,973

rrumbidgee ict.

By far the greater proportional increase is exhibited in the cas of the Murrumbidgee electoral district, where the total area unde cultivation has increased four and a half times in six years whilst on an average the figures for the other districts show a increase of about 90 per cent.

As regards the cultivation of wheat for grain only, it will b seen that in most of the above-mentioned districts it has taken th largest share of the total increased area placed under cultivatio during this short period of six years. In the Murrumbidgee th under this crop has increased to nearly nine times what it was 882; in that of Young it has grown from 13,316 acres to 19 acres; in that of Gundagai, from 9,150 acres to 24,253 ; and in the Murray River Valley, from 38,928 acres to 74,080 ; whilst in the other districts it has increased in proportion at of the general cultivation. Reverting to the examination e whole of the principal wheat-growing districts of New South es, the average yield per acre for the period of eight years r notice will be seen below.

Average yield per acre.

Wheat.—Average Yield per Acre, in Bushels.

Districts.	1881-2.	1882-3.	1883-4.	1884-5.	1885-6.	1886-7.	1887-8.	1888-9.	Average.
urn	15·6	17·3	13·3	17·1	9·5	18·9	10·7	5·12	13·4
	15·2	17·5	14·2	17·0	11·1	17·7	11·5	4·18	13·3
gton & Bogan.	13·5	16·2	14·1	17·2	6·4	16·2	12·9	2·56	12·4
o	16·4	16·6	14·9	16·6	11·4	17·0	15·9	8·14	14·6
y Valley	10·8	12·3	13·6	9·6	12·1	14·4	10·2	7·68	11·4
e	17·3	17·9	16·7	15·7	9·9	18·3	11·8	3·78	13·9
gai	18·2	18·2	15·8	18·4	11·4	20·2	12·6	5·65	15·1
	16·5	11·3	15·1	13·4	7·9	20·5	11·3	4·18	12·5
mbidgee	14·1	14·5	14·4	14·4	8·0	19·9	11·1	3·40	12·4
rth	17·3	16·6	16·0	16·3	10·1	14·7	15·1	4·00	13·8
ngland	19·2	21·1	19·3	20·1	15·4	17·1	16·7	10·11	17·4
and Gwydir	18·4	22·7	15·7	15·9	8·7	13·9	13·3	2·59	13·9
Coast	16·3	21·0	22·2	18·2	16·6	13·9	21·3	18·56	18·5
nes	19·5	20·8	19·6	20·5	10·2	13·8	17·8	5·91	17·1
	17·1	16·7	13·4	17·5	9·9	19·2	11·0	3·51	13·5
River Valley.	14·8	8·0	15·4	15·6	8·4	16·8	12·9	3·71	11·9
st	14·5	15·3	11·9	14·8	8·2	16·4	12·2	1·75	11·9
e	14·2	21·9	14·1	18·1	6·3	19·0	12·9	0·49	13·4
	20·5	20·5	19·0	23·6	14·2	20·0	14·3	13·42	18·2
Coast	20·7	20·5	22·6	23·0	17·1	14·6	17·4	15·53	18·9
sbury and an.	13·6	13·3	13·9	13·2	12·8	16·3	12·0	8·78	12·9
rn District	10·6	7·4	10·8	9·4	5·5	12·6	9·0	0·80	8·3
rage for whole ony.	15·3	16·3	14·9	15·5	10·4	17·3	12·1	4·75	13·0

Effect of drought.

The disastrous effects of the late drought are plainly illustrated in the foregoing table. With the exception of the Coast districts, which are liable to suffer rather from excess of moisture than otherwise, all the wheat-growing centres have been affected, and those that in ordinary seasons would yield the best return are among the greatest sufferers. Tumut, New England, Monaro, and the Murray Valley are the only districts where there has been a fairly good crop, whilst at Mudgee, Bathurst, Wellington, Gunnedah, and the other similar districts, the crop has been almost a total failure. The effects of this unexampled season were indeed so ruinous that in the Mudgee and Bathurst districts the farmers did not gather in sufficient grain for the next season's sowing. The Government was appealed to, and in consideration of the prevailing distress, orders were given to supply the farmers with sufficient wheat for the next year's operations. In this way some 50,000 bushels of wheat, imported chiefly from New Zealand, were supplied under certain liberal regulations as to recouping the Government for their expenditure.

Average yield of districts compared.

Comparing the returns of the various districts, but leaving aside the North and South Coast districts, where the area under wheat is too small to afford a valuable test as to their wheat-growing capabilities, it will be seen that Tumut, New England, and Glen Innes, have given the largest as well as the most consistent yield during the whole period. This is what might have been anticipated. The situation of these districts on the high plateau of the main range dividing the coastal region of the Colony from the Great Western Plains, places them under conditions as to soil, climate, and rainfall similar to those which obtain in the richest wheat-growing countries of Europe and America.

Gundagai, Monaro, Orange, Gunnedah, Mudgee, and Young follow next, in the order named, as regards yield per acre, which in each case may be considered fairly good. Yass, Goulburn, and Tamworth also yield a fair average crop. The scale sensibly decreases in the other districts of the Colony, which, with the exception of Bathurst and the Hunter Valley, are situated on the confines of the lower slope of the main range, and the great pl of the interior.

Decrease in yield as descent is made to plains.

It may be stated as a general law that those districts situated on the higher table-lands of the main Dividing Range are the best adapted to the cultivation of wheat, and that the average yield decreases in an almost constant ratio as a descent is made towards the plains, where the average falls as low as in similar formations in South Australia and Victoria. Bathurst is the only exception to this general rule, but as it is in that district that the greater quantity of wheat is grown, as compared with the total area, the reason of its small average annual yield must be sought apart from the circumstances of its geographical situation. It may be that the constant succession of crops has injured the productiveness of the soil, and brought about a decreased yield in the district where cultivation has been most continuous.

Rainfall in wheat centres.

The average rainfall on some of the most important wheat-growing centres during the year 1888 will be found below. The scantiness of the supply will certainly appear quite sufficient to account for the failure of the season's crops, especially as a considerable portion of the rain fell at a period too late to benefit the farmer.

District.	Rainfall in 1888.	District.	Rainfall in 1888.
Goulburn	20·6 inches.	Tamworth	16·4 inches.
Yass	17·4 ,,	New England	21·3 ,,
Wellington	10·4 ,,	Bathurst	15·0 ,,
Monaro	17·8 ,,	Mudgee................	12·5 ,,
Murray	13·7 ,,	Glen Innes	23·7 ,,
Orange and Carcoar	16·8 ,,	Young	10·9 ,,
Gundagai	12·1 ,,	Hunter Valley......	16·3 ,,
Forbes	11·3 ,,	Tumut	26·2 ,,
Murrumbidgee......	11·2 ,,		

Average yield of New South Wales compared with other colonies.

If the average production of wheat per acre in New South Wales be compared with that of the other colonies of the Australasian group, it will be found that this Colony occupies a very satisfactory place. Its average is greater than that of any other portion of continental Australia, although somewhat less than the Tasmanian yield, and considerably below that of New Zealand. The following table shows the average produce of each Australasian Colony since 1874.

Average Yield of Wheat in Bushels per Acre in Australasia for the Years ended 31st March, 1874–88.

	1874	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	Mean.
New South Wales	13·43	12·47	14·66	16·43	13·84	14·74	15·48	14·69	15·35	16·35	15·00	15·52	10·45	17·37	12·06	14·55
Victoria	13·56	14·67	15·49	13·15	12·41	8·76	13·29	9·95	9·40	9·08	14·10	9·52	8·99	11·49	10·81	11·64
South Australia	7·87	11·75	11·95	5·40	7·76	7·15	9·78	9·96	4·57	4·21	7·94	7·53	7·53	7·53	9·75	8·04
Queensland	..	..	..	..	10·63	13·56	8·11	20·40	8·41	13·89	4·34	16·17	5·11	8·12	22·10	11·44
Western Australia	13·44	12·00	11·00	12·00	11·00	9·97	14·94	14·94	7·00	11·00	13·00	13·00	11·50	12·25	9·80	11·79
Tasmania	16·17	18·51	16·38	19·30	18·12	16·10	23·22	14·99	18·88	20·27	17·74	19·30	17·32	17·91	16·67	18·06
New Zealand	25·61	28·15	31·54	28·63	26·30	22·94	28·1	25·07	22·00	26·28	26·02	25·43	24·40	24·80	26·37	26·16

npared with the majority of European countries, the yield eat must appear inconsiderable, both in regard to the total ity obtained and the produce per acre. The return from of the chief wheat-growing countries is given below.

Comparison with other countries.

roduce of Wheat per acre in Wheat-growing Countries of Europe and America.

Wheat-growing Countries.	Average produce of wheat per acre.
	Bushels.
ark	31·1
l Kingdom	26·9
y	25·1
m	22·8
d	21·5
ba	20·3
ny	18·8
	16·9
	16·4
Columbia	15·0
	14·1
ry	13·6
	12·1
States	11·7
, Nova Scotia, and New Brunswick	9·9
in Europe	4.6
uth Wales (since 1873)	14·6

WHEAT CROP OF THE WORLD.

e importance of Australasia in the wheat markets of the is not great, since out of a total production of about million bushels raised in 1888 only about 48 million bushels, Wheat production of the World.

or 2·2 per cent., were Australasian. The following statement based on the returns of the U.S. Department of Agricultur shows the approximate crop of the world for the year named :—

Countries.	Yield.
	bushels.
United States	428,967,842
Canada	33,008,000
Argentine States and Chili	29,268,813
Austria	52,683,862
Hungary	135,896,905
France	282,239,159
Germany	108,307,500
Great Britain	79,178,632
Italy	109,420,870
Roumania	52,683,862
Russia	262,639,498
Spain	104,343,316
Turkey	43,903,219
Other European Countries	48,155,067
India	275,288,898
Other Asiatic Countries	86,342,997
Africa	39,062,581
Australasia	47,588,161
Total	2,218,979,182

CONSUMPTION AND PRODUCTION OF BREADSTUFFS.

Production of wheat not equal to demand.

The production of wheat still remains considerably below th consumption of the Colony. The accompanying table has bee prepared with a view to illustrate the state of the Colony in thi respect, and shows the total consumption of wheat, the hom production, and the net deficiency for twenty-seven years.

Consumption and Production of Wheat in New South Wales.

Year.	Total consumption.	Available home production.	Net Deficiency.	Consumption of wheat per head.	Home produce per head.	Deficiency
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1862	2,333,614	1,458,715	874,899	6·4	4·0	2·4
1863	1,867,639	912,234	955,405	5·0	2·4	2·6
1864	2,590,623	667,729	1,922,894	6·7	1·7	5·0
1865	2,487,146	1,072,727	1,414,419	6·1	2·6	3·5
1866	2,706,766	775,307	1,931,459	6·5	1·8	4·7
1867	3,188,730	2,023,832	1,164,898	7·3	4·6	2·7
1868	2,449,400	1,214,233	1,235,167	5·4	2·7	2·7
1869	2,894,180	1,635,998	1,258,182	6·1	3·5	2·6
1870	4,258,515	2,992,978	1,265,537	8·7	6·1	2·6
1871	2,503,487	796,055	1,707,432	4·9	1·6	3·3
1872	3,198,375	1,998,956	1,199,419	6·1	3·8	2·3
1873	4,064,706	2,680,177	1,384,529	7·5	4·9	2·6
1874	3,388,065	2,019,784	1,368,281	6·0	3·6	2·4
1875	3,856,142	1,964,678	1,891,464	6·6	3·4	3·2
1876	3,647,938	1,755,235	1,892,703	6·0	2·9	3·1
1877	3,624,066	2,134,070	1,489,996	5·8	3·4	2·4
1878	4,271,220	2,125,332	2,145,888	6·5	3·2	3·3
1879	4,763,341	3,116,015	1,647,326	6·9	4·5	2·4
1880	5,149,867	3,245,422	1,904,445	7·1	4·5	2·6
1881	4,267,446	3,390,710	876,736	5·6	4·4	1·2
1882	5,289,216	3,043,525	2,245,691	6·6	3·8	2·8
1883	5,023,468	3,618,475	1,404,993	6·0	4·3	1·7
1884	5,737,260	3,893,146	1,844,114	6·5	4·4	2·1
1885	6,520,784	3,808,908	2,711,876	7·0	4·1	2·9
1886	5,893,766	2,218,383	3,675,383	6·0	2·3	3·7
1887	7,809,642	5,306,682	2,502,960	7·6	5·2	2·4
1888	7,909,104	4,186,298	3,722,806	7·4	3·9	3·5

Consumption in different years compared.

A false idea would probably be formed if the result of any one year were separately compared with that of any other, as it frequently happens that the transactions of one year affect the trade of the following year to a very large extent. To cover irregularities of export and import, and in order to facilitate comparison, the period has been divided into series of five years. The relative rate of production and consumption will be found below, the basis of comparison adopted being that of population.

Consumption and Production of Breadstuffs.

Period.	Average yearly consumption per head.	Average yearly home produce per head.	Deficiency, yearly per head.
	Bushels.	Bushels.	Bushels.
1862-66	6·1	2·5	3·6
1867-71	6·5	3·7	2·8
1872-76	6·4	3·7	2·7
1877-81	6·4	4·0	2·4
1882-86	6·4	3·8	2·6
1887-88	7·5	4·5	3·0

Average yearly production.

It will be seen that during the first period, the average yearly production was considerably less than half the consumption, the deficiency being about 60 per cent. At the close of the series the home production had largely increased, so that the deficiency was scarcely more than 40 per cent. during the last quinquennium. There has been all through the period a tendency towards closing the gap between the demand and the supply, and the results of the harvest of 1887–8 exhibited a still further advance in this direction. For the season named the yield has been equal to 5·65 bushels per head, which, at the average rate of consumption calculated for the last quarter century, would leave a deficiency of three-quarters of a bushel per head of population. But although the yield of that season was so copious, the available quantity of wheat was not so large as anticipated, as in a number of districts a considerable proportion of the crop was spoilt, owing to the heavy rains which fell during the reaping season. This seems to indicate, nevertheless, that the time is not far distant when the Colony, in the matter of breadstuffs, will be independent of outside contributions, and this conclusion may be hazarded in spite of the very great deficiency of 1888–9, amounting, as it did, to over six million bushels.

The average consumption of wheat in New South Wales amounted during the past ten years to 6·7 bushels per head; a rate which is higher than that of most countries whose records have been available for reference; the excess over that of the United Kingdom being 0·8 bushels per head. The consumption includes what is used for all purposes except seed, a fact which must be borne in mind, as the quantity used for the manufacture of biscuits and other articles, as well as for other than food purposes, is not inconsiderable. The following is the average consumption for the principal countries:—

Average consumption.

	Consumption per Head (Bushels).
United Kingdom	5·9
France	8·1
Germany	3·0
Russia	2·1
Austria	2·9
Italy	5·4
Spain and Portugal	6·4
Belgium and Holland	5·0
Scandinavia	1·4
Turkey	6·1
United States	5·4
Canada	6·6
New South Wales	6·7
Australasia	6·7

The relative proportions of flour and wheat imported have changed very considerably during the twenty-five years above alluded to, as will be seen hereunder.

Importation of breadstuffs.

Average yearly Import of Flour and Wheat.

Period.	Flour in equivalent of wheat.	Wheat.
	Bushels.	Bushels.
1862-66	1,066,892	801,765
1867-71	905,540	750,705
1872-76	1,012,110	838,388
1877-81	1,529,140	545,914
1882-86	2,484,645	613,163
1887-8	3,375,750	908,337

But this is only a partial view of the case. A comparison between the importation of flour and the total home consumption gives an

Decline in quantity of wheat imported

entirely different result, as will be seen from the next table. The figures in each case are the yearly averages for the different periods.

Comparison between amount of Flour Imported and Made in the Colony.

Period.	Total consumption of flour in equivalent of wheat. — Yearly average.	Flour imported for home consumption in equivalent of wheat. — Yearly average.	Flour manufactured in the Colony in equivalent of wheat. — Yearly average.	Percentage of flour manufactured in the Colony to whole consumption. — Yearly average.
	Bushels.	Bushels.	Bushels.	
1862–66	2,422,927	644,206	1,788,722	73·5
1867–71	3,069,285	610,429	2,458,856	80·1
1872–76	3,648,602	804,692	2,846,910	77·9
1877–81	4,473,852	1,170,719	3,303,133	73·8
1882–86	5,812,836	1,835,218	3,977,618	68·5
1887–88	7,940,781	2,347,448	5,593,333	70·4

Mill-power up to consumption.

It will be seen from this table that the mill-power of the Colony, or rather the manufacture of flour, has fairly kept pace with the increase in consumption, while the actual quantity of flour manufactured yearly has increased from an average of 1,788,722 bushels to 5,593,333 bushels.

The change in the character of the imports noted above, that is, the substitution of flour for grain, is attributable to a change in the markets whence the supply is drawn, Victoria having to a large extent superseded South Australia. The prominence of Victoria as an exporter of breadstuffs to this Colony dates from 1878, and the excess of flour over wheat so exported is very pronounced. South Australia, whence the chief supply of this Colony was formerly drawn, and from which large quantities are still obtained, has, since the competition of Victoria became formidable to her, greatly diminished the proportion of wheat to flour, so that, of late years, the quantity of South Australian wheat sent to this Colony has been comparatively insignificant. A general failure of the crop of 1888–9 throughout continental

Australia is now operating greatly in favor of New Zealand, whose crop was as bountiful as the rest of Australasia was scanty.

Export of breadstuffs.

The export of breadstuffs from New South Wales represents for the most part a re-export of foreign produce, Queensland being the chief buyer. In the year 1881 the export, which had previously been small, suddenly increased threefold. And though showing a decline during the succeeding years it still retains respectable proportions, the average during the last five years being over 14 per cent. of the total quantity imported.

Wheat grown for hay.

Wheat is also grown in considerable quantities for hay and dry fodder for cattle, and the area under cultivation is steadily increasing, although the produce is still short of the requirements of the country. The whole of the wheat grown for hay in the Colony is consumed locally. The following statement shows the extent of land under wheat for hay, with the yearly produce, during thirteen years.

Area under Wheat for Hay, and Yield.

Year ended 31 March.	Acres.	Produce in tons.	Average per acre.	Year ended 31 March.	Acres.	Produce in tons.	Average per acre.
1877	17,115	21,297	1·24	1884	49,348	55,119	1·12
1878	29,640	29,137	0·98	1885	86,584	87,328	1·01
1879	22,888	31,320	1·36	1886	105,122	74,606	0·71
1880	25,281	32,943	1·30	1887	74,070	109,851	1·48
1881	41,137	44,037	1·07	1888	60,340	70,392	1·16
1882	39,428	42,378	1·07	1889	102,838	42,041	0·41
1883	42,592	43,997	1·03				

Cultivation of wheat for hay increasing.

From the foregoing figures it will be seen that the cultivation of wheat for hay is increasing at a much greater ratio than that for grain, the area so cultivated having reached in 1888–89 nearly six times that cultivated for the same purpose in 1877. Long series of dry years may in some measure account for the increased area devoted to hay, but the steady demand for hay and chaff, wheaten as well as oaten, and the large import of this produce, fully justify an extension of its cultivation. There still exists a considerable difference between the demand for hay and the supply from within the Colony, as there were 21,952 tons of hay and chaff imported in 1887, principally for consumption in the Metropolitan district, and 45,097 tons in 1888; but this difference is well within the capacity of the colony to produce, and the time is not far distant when New South Wales will become independent of Victoria for the supply of this commodity. South Australia will probably continue, however, to supply for some years to come the growing wants of the Barrier, Broken Hill, and Silverton districts.

The total area under wheat in 1888, both for grain and for hay, was 407,641 acres, producing only 1,450,503 bushels of grain and 42,041 tons of hay, the value of both kinds of produce being £518,437.

MAIZE.

Principal centre of cultivation.

The cultivation of maize in this Colony is almost as important as that of wheat, and forms the staple industry in the valleys of coastal rivers, which are peculiarly adapted, both by soil and the climate, for the growth of this cereal. On the table-land also its cultivation is attended with fair results, but as the land rises in elevation so does the average produce per acre proportionately decrease. Attempts have been made to grow maize in the western division of the Colony, but success has only been met with under special conditions of natural or artificial irrigation, for the plant demands a considerable amount of moisture, and thrives better in the moist climates of the coast than anywhere else in the country. Although the area under maize is less than half of that under wheat cultivation, the gross yield obtained is frequently as large, and in some seasons greatly exceeds that of wheat.

Distribution of production.

The following statement shows the distribution of the production of maize in the Colony during the seven years which ended with March, 1889, as well as the average yield obtained in each district.

Maize.—Average Yield per Acre in Principal Districts.

District.	1882-3	1883-4	1884-5	1885-6	1886-7	1887-8	1888-9	Average
	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels
Tamworth and New England	21·8	18·9	18·3	19·0	18·0	23·0	12·4	18·8
Macleay	49·9	51·9	43·1	43·2	34·6	24·7	34·6	40·3
Hastings and Manning......	35·9	40·6	27·5	33·9	31·6	22·0	34·2	32·2
The Clarence	49·9	36·2	38·4	33·6	20·9	45·0	33·6	36·8
The Richmond	36·5	38·4	27·2	30·0	25·8	23·8	32·3	30·6
Grafton	32·0	42·2	28·6	31·3	18·1	45·0	36·7	33·4
Gloucester	29·1	33·0	19·1	29·7	30·6	21·0	26·4	26·9
Glen Innes	24·9	22·8	19·0	23·8	19·3	23·0	19·8	21·8
Hunter River Valley	28·0	33·0	21·7	29·8	27·4	24·1	27·0	27·3
Mudgee......................	17·7	19·7	17·6	22·8	20·6	25·9	5·3	18·5
Tumut	33·5	31·9	31·1	44·5	35·6	40·9	45·3	37·5
Hawkesbury and Nepean ...	22·9	34·7	21·7	33·1	29·6	28·5	31·4	28·8
South Coast	34·8	34·0	31·2	33·5	22·6	36·9	28·0	31·6
Other districts	20·7	15·7	12·1	15·1	17·9	21·8	12·6	16·6

Coast production largest.

It will be seen that the average production is greatest in the north and south coast districts. In the Hawkesbury and Nepean and the Hunter River valleys, where cultivation extends to a greater distance from the coast, and is under altered circumstances as to rainfall, the yield is somewhat less; while in the higher part of the country the decline is very appreciable, for in the districts of Tamworth, New England, and Mudgee, the average yield is only about 54 per cent. of that of the north coast.

Favourable condition of the district of Tumut.

The district of Tumut appears, however, to be an exception to the general rule, as the yield is almost as large and even more regular than in the coast district. But the area under maize cultivation at Tumut is hardly large enough to justify any deduction being drawn from its exceptional yield. It may be, however, noted that Tumut stands at the head of the other agricultural districts of the Colony as regards its high and well sustain average yield of wheat and other grain crops; a circumstan attributable to the general excellence of the soil, and the fair abundant and regular supply of rain with which the district favoured. The relative position of the districts of the Colon where maize is principally grown is as follows :—

Maize-growing in various districts.

Districts.	Average per acre for the period 1882-1888.	Maximum average per acre for any one year.	Minimum avera per acre for an one year.
	Bushels.	Bushels.	Bushels.
North Coast	33·3	44·4	27·6
Tumut	37·5	45·3	31·1
South Coast..............	31·6	36·9	22·6
Hawkesbury and Nepean...	28·8	34·7	21·7
Hunter River	27·3	33·4	21·7
Glen Innes	21·8	24·9	19·0
Tamworth and New England	18·5	23·0	12·4
Mudgee	18·5	25·9	5·3
Other districts, where maize is not grown in large quantities	16·6	21·8	12·1

Increase in Area devoted to maize.

The area under maize cultivation was increased from 57,9 acres in the year 1862 to 166,101 in 1889, and was therefore trebl in twenty-seven years. Considered in the light of the gener advance of settlement, particularly in those districts where th cereal may be successfully cultivated, there is nothing remarka in the progress thus exhibited, especially as there is no lack of la in New South Wales fit for maize cultivation. The fact is, neve theless, worthy of notice, that in the year 1888 an area of 24,7 acres was added to the total acreage under maize for grain in 188 a much greater increase from one year to another than ever to lace during the past twenty-eight years, with the exception of the ar 1879, when 25,072 acres were added to the area under maize 1878, and though 1889 saw a slight decrease due to the baneful ects of the drought in the upland districts, it may be assumed t the increased attention directed to maize growing will be manent.

he following table shows the state of maize cultivation in the ony during the period referred to—1862 to 1889 inclusive:—

State of maize cultivation.

Maize—Area under Crop, and Yield.

ear ded arch.	Area under crop.	Yield.	Aver-age per acre	Year ended 31 March.	Area under crop.	Yield.	Aver-age per acre.
	Acres.	Bushels.	Bushels		Acres.	Bushels.	Bushels
862	57,959	1,727,434	29·8	1876	117,582	3,410,517	29·0
863	75,991	2,559,258	33·6	1877	116,364	3,879,537	33·3
864	95,689	2,925,950	30·5	1878	105,510	3,551,806	33·6
865	101,584	3,114,212	30·6	1879	130,582	4,420,580	33·8
866	113,443	2,759,904	24·3	1880	135,034	4,761,856	35·2
867	119,519	3,878,064	32·4	1881	127,196	4,518,897	35·5
868	115,522	3,132,505	27·1	1882	117,478	4,330,956	36·9
869	120,807	3,777,405	31·2	1883	118,180	4,057,635	34·3
870	128,041	4,880,805	38·1	1884	123,634	4,538,604	36·7
871	107,178	2,340,654	21·8	1885	115,600	3,389,505	29·3
872	119,956	4,015,973	33·4	1886	132,709	4,336,163	32·6
873	116,745	3,984,958	34·1	1887	146,957	3,825,146	26·0
874	116,648	4,128,865	35·3	1888	171,662	4,953,125	28·8
875	118,436	3,618,436	30·5	1889	166,101	4,910,404	29·5
				Average for 28 years			31·7

The production per acre, as may be gathered from the foregoing figures, is a very variable item, averaging, for the whole of the Colony from the minimum of 21·8 bushels, which was obtained in the year 1871, to 38·1, the maximum, which was attained in 1870. The yield of the last season although below the average per acre will, notwithstanding the drought, be almost as large as that of the previous one, which was the largest ever handled in New South Wales.

Maize is not only cultivated as a grain crop, but a small area is sown for green food for cattle, chiefly on dairy farms. In 1888 the area thus cultivated was 4,992 acres, the greater part in the Camden and south coast districts.

OATS.

This cereal is cultivated as a grain crop, principally in the wheat-growing districts of the Colony; and as it is essentially a produce of cold climates it thrives best in those parts of the country with a winter of some severity. Bathurst, Carcoar, Orange, Monaro, and New England, are the principal centres of oat cultivation, but the latter district yields the best crops. The average of the Colony for 1888–9 is only 13·77, but that obtained in the three electorates of New England, Monaro, and Glen Innes reached 24·5, 17·7, and 26·6 bushels per acre respectively.

In the district of Tumut little attention has been hitherto paid to the crop, although the average yield over the small area cultivated reached 24·3 bushels per acre, or 10·5 bushels above the average yield for the whole Colony during the season 1888–9. No oats are grown in the northern portion of the coastal districts for the purpose of a grain crop. In the southern coast districts the area under oats for grain is very limited, but that under oats for hay or green food is not inconsiderable. The following table illustrates the state of the cultivation of this crop since 1862.

Area in cultivation

Oats.—Area under Crop, and Yield.

Year ended 31 March.	Area.	Production.	Average per acre.	Year ended 31 March.	Area.	Production.	Average per acre.
	Acres.	Bushels.	Bushels.		Acres.	Bushels.	Bushels.
1862	7,224	152,426	21·1	1876	18,855	352,966	18·7
1863	9,988	201,415	20·2	1877	21,828	461,916	21·2
1864	13,022	213,924	16·4	1878	18,580	358,853	19·3
1865	14,098	189,524	13·4	1879	22,129	447,912	20·2
1866	10,939	116,005	10·6	1880	23,883	516,937	21·6
1867	14,914	304,028	20·4	1881	17,922	356,121	19·9
1868	13,142	156,965	11·9	1882	16,347	356,566	21·8
1869	12,129	164,687	13·6	1883	24,817	617,465	24·9
1870	17,301	400,766	23·2	1884	17,810	376,635	21·1
1871	10,683	119,365	11·2	1885	19,472	425,920	21·9
1872	13,795	280,887	20·3	1886	14,117	279,107	19·8
1873	13,586	270,967	19·9	1887	23,947	600,892	25·1
1874	16,524	322,449	19·5	1888	19,393	394,762	20·3
1875	17,973	293,135	16·3	1889	7,984	109,931	13·8

Cultivation of oats for grain.

It will be seen that the cultivation of oats for grain has been very irregularly pursued during the period embraced by this table, rising rapidly during the earlier years and remaining practically stationary since 1875. The market for oats is chiefly in the metropolitan district, and the demand depends largely upon the price of maize, and to this uncertainty of sale is very largely due the fluctuation in the area devoted to this cereal.

Average yield per acre.

The mean average production of oats for grain for the period 1862–89 was 18·8 bushels per acre, the minimum obtained in any year being 10·6 bushels in the season 1865-66, and the maximum 25·1 bushels in that of 1886–87. Compared with the other Continental Colonies, New South Wales holds, in regard to average yield, the second rank, Victoria coming first, but both these colonies are surpassed by Tasmania and New Zealand. The climate of the latter colonies is much more adapted for the successful cultivation of this grain, the average produce of New Zealand in particular being very nearly equal per acre to that of the United Kingdom, and on a par with the best oat-producing countries of the Old World.

Average yield of oats per acre in N.S. Wales and other colonies.

In the following table figures will be found giving the average produce per acre in each of the Australasian Colonies during fifteen years, the records for Queensland alone being incomplete.

Average Production of Oats in Bushels per Acre in the Australasian Colonies.

Colonies.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	Average.
New South Wales	18·71	16·31	18·72	21·16	19·31	20·24	21·64	19·87	21·81	24·88	21·15	21·87	19·77	25·08	20·35	20·72
Victoria	15·69	18·46	21·92	19·91	19·39	17·60	24·00	17·62	24·57	26·17	25·07	23·40	21·72	22·91	22·92	21·42
*South Australia	10·61	14·61	16·69	10·65	11·96	12·01	15·02	11·50	10·06	11·13	14·65	12·20	12·20	12·20	12·20	12·55
Queensland	..	..	..	..	10·11	9·65	24·74	17·94	12·74	16·58	8·90	15·17	4·84	10·41	24·26	14·12
Western Australia	19·22	16·00	15·00	15·00	14·00	18·02	19·00	19·00	10·00	15·03	17·00	18·00	14·50	16·00	15·13	16·06
Tasmania	20·98	26·82	25·40	24·21	22·32	24·82	28·61	22·13	28·44	27·34	27·39	28·65	26·82	25·95	18·20	25·20
New Zealand	29·81	35·22	37·70	31·24	31·68	30·11	36·53	32·05	28·45	32·89	35·11	34·84	26·11	30·92	31·24	32·26

* No returns have been collected since 1884.

Average yield in principal countries.

The average yield in the principal countries of the world where s are extensively grown is as follows :—

Principal oat-growing countries.	Average produce of oats per acre.
	Bushels.
and	42·1
um	41·8
ay	39·7
ed Kingdom	37·7
nark	32·3
ce	26·0
d States of America	26·0
any	21·9
ria	20·9
South Wales	20·7
ary	20·2
	19·3
a	12·3
of Good Hope	8·1

Cultivation of oats neglected.

e cultivation of oats as a staple agricultural crop has been neglected in the Colony, though the return has not been tisfactory. It is possible that in the near future the growth is grain will receive greater attention, especially as the ency between the production and the consumption is very derable. The elevated districts of Monaro, Argyle, Bathurst, New England, in preference to other parts of the Colony, in vast areas of land where the cultivation of this grain could rried on with remunerative results.

Oats as a fattening food.

connection with this subject it may not be generally known the relative nourishment of oats exceeds that of either maize heat, weight for weight. If 100 be taken as the value of oats attening purposes, the respective values of equal weights of ther cereals are :—

Oats	100
Wheat	70
Maize	62

d for equal measures :—

Oats	100
Wheat	131
Maize	107

The production of this grain is far from satisfying the wants of the Colony, and the importation is, therefore, very large, 1,221,371 bushels having been imported from abroad in the year 1888. New Zealand is the principal source of supply, the quantity obtained from that colony in 1888 being 1,058,183 bushels. Much yet remains to be done before the Colony can be independent of outside assistance in regard to the supply of oats, as, for some years past the quantity produced was only 24 per cent. of the amount consumed, and there would thus be an ample market within New South Wales for the produce of 65,000 acres more than is usually reaped.

Supply from New Zealand.

In parts of the Colony where the climate is not suitable for maturing the grain, a large area is sown for hay and green food. The area under oats for these purposes has increased from 28,109 acres in 1861 to 126,488 acres in 1886, being over three and a half times as large in the latter as in the former year; but it fell to 86,451 acres in 1887 and 85,439 acres in 1888. Oaten hay is much in demand, and sells readily at remunerative prices; and, as there is less expense and lighter labour attached to this form of cultivation, the system of growing oats for hay is consequently more in favour with the farmers of New South Wales than the cultivation of the grain. The area under the two crops stood to each other in the following relation in the year 1889:—

Oaten hay in demand.

Oats for hay and green food.

Area under oats for grain	7,984	acres.
Area under oats for hay and green food.........	88,989	,,
Total area under oats	96,973	acres.

The area harvested for grain being only 8·2 per cent. of th total area under oats. The following statement shows the cultivation of oaten hay since 1877, and the yield per acre.

Colony is only 10·2 bushels. The deficiency in the production of wheat amounts to 37 per cent., barley, 28 per cent., and oats, 68 per cent. There is, however, an excess in the production of maize over the local consumption, amounting to 7·3 per cent., which reduces the total average deficiency in the production of the principal grain crops to 25 per cent. There is no apparent reason why the local production of grain should not equal the local demand; on the contrary, the resources of the Colony are such that under normal conditions the supply of grain should largely exceed the requirements, and an increasing excess of production become yearly available for export, either as grain or meat.

N.S.W. yield greater than other colonies.

The experience of past years distinctly shows that in the matter of soil, climate, and other natural conditions, New South Wales is, on the whole, better favoured, and consequently her average yield per acre of wheat, maize, and barley, is greater than that of any other continental Australian province, Victoria not excepted. Extending the field of comparison, the production of cereals is found to reach an average which places New South Wales on a level with countries usually considered as rich agricultural states. It is better than the average yield of the United States, of Italy, and Hungary; and, in some respects, almost on a level with that of Germany, Austria, and France. The area adapted for cereal growing is very considerable, and with a better knowledge of the capabilities of the various kinds of soils and well devised means of water storage, there should be practically no limit to the production of grain.

MINOR GRAIN CROPS.

The minor grain crops harvested are rye, millet, sorghum, and imphee. Little can be said on this subject except that, as in the case of other cereals, the suitability of the soil for their production is an established fact. There is, however, so little demand for these kinds of grain that their cultivation in New South Wales is very limited.

Rye.

The area under rye for grain in 1888 covered only 512 acres, whilst 510 acres were sown for green food. The average production of the grain crop was 11·7 bushels per acre.

Millet.

Millet was only cultivated over an area of 881 acres, 473 of which were harvested for grain, the remaining 408 acres being cut green for cattle. The greater part of the whole crop of millet was obtained in the Hunter River valley. The average production of the Colony amounted to 14·6 bushels per acre.

Sorghum and imphee.

The cultivation of sorghum and imphee for grain appears to have been abandoned, but the area sown in 1887 for green food for cattle amounted to 5,850 acres, chiefly within the dairy farming districts of Kiama, Illawarra, and Shoalhaven.

SOWN GRASSES, AS FOOD FOR CATTLE.

The area under these grasses is constantly increasing in the Colony, and in the course of the year 1888 there were under artificial grasses 228,808 acres, an increase of 168,559 acres over the area so cultivated ten years previously.

Lucerne.

Lucerne and other permanent grasses are laid down principally in the Hunter districts, and the south coast, 113,544 acres being so cultivated in the Shoalhaven and Kiama districts alone. The practice of sowing permanent grasses is also extending to the north coast districts, and in 1888 there were 24,914 acres under grass in the Richmond district. It is, however, in those portions of the Colony where dairy farming is principally carried on that the practice of laying down permanent grasses is most general.

POTATOES.

Area under potatoes.

The cultivation of the potato shows little improvement during the last twenty-five years, in regard to acreage under crop, the area planted being very little in excess of that of the year 1865, whilst the yield of last season was exceeded by nearly every year since the date named. At present the Colony has to make up by importation, from the other colonies, a considerable deficiency, amounting in 1888 to 52,239 tons, or nearly 46 per cent. of the total consumption for the year. The returns for 1888–9, however, exhibit a very large decrease in the area cultivated, as well as the crop, so that there will be a very marked increase in the quantity required from abroad during the current year. The total yield during the last season amounted to 36,839 tons only. The following table illustrates the state of the cultivation of potatoes since 1862.

Total production and yield per acre.

Area under Potatoes, and Yield.

Year ended 31 March.	Acres.	Tons.	Year ended 31 March.	Acres.	Tons.
1862	10,040	30,942	1876	13,805	41,203
1863	9,284	24,167	1877	14,171	42,939
1864	11,618	32,141	1878	13,862	34,957
1865	14,398	52,061	1879	16,724	53,590
1866	15,210	31,367	1880	19,271	62,228
1867	18,810	43,870	1881	19,095	52,112
1868	15,440	33,482	1882	15,943	44,323
1869	16,391	30,768	1883	14,462	43,461
1870	17,132	54,200	1884	14,953	36,977
1871	13,927	34,118	1885	12,417	31,335
1872	14,770	44,758	1886	15,166	38,695
1873	15,124	45,112	1887	17,322	45,803
1874	14,212	42,281	1888	20,915	61,455
1875	13,604	38,564	1889	15,419	36,839

Principal centres of cultivation.

The centres of potato-growing at present are Orange, Carcoar, Argyle, and New England. Its cultivation is, however, very widely distributed throughout the Colony, but in many places formerly well-known for its production, it has been largely displaced by maize and other cereals.

TOBACCO.

Soil and climate of New South Wales suited for tobacco.

Both the soil and climate of the Colony of New South Wales are well fitted for the growth of the tobacco plant. Tobacco, however, demands for its proper cultivation special knowledge on the part of the growers, and is not for this reason so largely cultivated as would otherwise be the case. In the year 1862, the first shown on the subsequent table, there were only 224 acres under cultivation, producing 2,647 cwt. of leaf tobacco. In the following years, however, the area had largely increased, chiefly in the agricultural districts of Argyle and the Hunter River valley. Since then the growth of tobacco seems to have been almost entirely abandoned in the districts where it was first attempted, but has spread to other parts of the Colony; the Murrumbidgee valley and Tumut being now the principal producers. More than one-half of all the tobacco grown in the Colony is obtained in the latter district. The growth of tobacco is chiefly in the hands of Chinese, few European agriculturists apparently possessing the necessary skill for the proper cultivation and preparation of the leaf.

Chinese principal cultivators.

During the last ten years the area devoted to the cultivation of tobacco has very largely increased and it is a noteworthy fact that the quantity of colonial leaf used in the Colony now amounts to three-fourths of the total consumption. The present year has witnessed a remarkable increase in the acreage under tobacco, and consequently in the production of this plant, the area being more than thrice that of 1888, with a corresponding increase in the yield of leaf. The following table shows the progress of the industry during the last quarter century.

Area and production.

Cultivation of Tobacco.

Year ended 31 March.	Area.	Production.	Year ended 31 March.	Area.	Production.
	Acres.	Cwt.		Acres.	Cwt.
1862	224	2,467	1876	491	4,098
1863	896	15,315	1877	333	2,440
1864	534	4,851	1878	399	3,049
1865	807	4,036	1879	835	7,932
1866	1,499	7,469	1880	592	6,221
1867	1,326	2,478	1881	1,791	19,469
1868	627	6,035	1882	1,625	18,311
1869	875	7,925	1883	1,815	17,540
1870	366	3,192	1884	1,785	20,006
1871	225	700	1885	1,046	9,914
1872	567	4,475	1886	1,603	22,947
1873	440	2,751	1887	1,203	13,642
1874	199	1,261	1888	2,371	23,465
1875	539	6,069	1889	4,833	55,478

Over production of tobacco.

The total consumption of manufactured tobacco and cigars during 1888 was 2,963,149 lbs., of which 2,074,300 lbs. were made in the Colony out of 610,485 lbs. of American leaf and 1,463, 815 lbs. locally grown. The production for 1889 is equal to 6,213,000 lbs., and allowing one-third for damage and waste, there will still remain 4,142,000 lbs., against a demand for scarcely more than one-third the quantity. The local leaf does not compare favourably with the American, and cannot be exported profitably, so that the success of the present year, if it is to be utilized, will require to be consumed in the Colony. It is very probable, therefore, that the area under tobacco will show a marked decline during the next two years.

SUGAR-CANE.

Introduction of the sugar-cane in New South Wales.

The first agricultural returns in which mention is made of the cultivation of the sugar-cane and the production of sugar in New South Wales only date from 1863. In that year 2 acres were returned as having produced 280 ℔. of sugar, and it will appear strange that out of this quantity 220 ℔. were stated to be the produce of one acre of cane, grown in the northern part of the county of Bathurst, while the remaining 60 ℔. were produced on the banks of the Macleay River. The district last mentioned may be considered as the principal seat of this industry, during its earlier stages. Cane cultivation, however, soon extended to the northward, and in a very few years the richest portions of the lower valleys of the Clarence, Richmond, Tweed, and Brunswick, were occupied by settlers engaged in the planting and growing of cane. Mills were erected in the chief centres of cane cultivation, and cane-growing and sugar manufacturing are now the principal and best established industries of the north-eastern portions of the Colony.

Northern rivers suit sugar-cane.

The soil and climate of the valleys of the northern rivers are in most respects well adapted to the successful cultivation of the sugar-cane. Occasional spring frosts, however, cause considerable damage, and it was the risk of failure from this cause which led the settlers on the Macleay to seek a warmer climate farther north, free from the danger arising from frost. In this they only partially succeeded, for in the Clarence, Richmond, and Tweed valleys, frosts are not altogether unknown.

Progress of sugar-growing.

The following table shows the progress of this industry during the last thirteen years. The figures relating to the area yearly placed under cane are obtainable for earlier dates, but the number of tons produced cannot be ascertained prior to 1876. The sugar-cane not being an annual crop, the area under cultivation has been divided, as far as practicable, into productive and non-productive, the former representing the number of acres upon which cane was cut during the season, and the latter the area over which it was unfit for the mill, or allowed to stand for another year.

Area in Production of Sugar-cane.

Progress of sugar-growing.

Year.	Area.		Total.	Production in tons of cane.
	Productive.	Non-productive.		
	Acres.	Acres.	Acres.	
1863	....	....	2	....
1864	....	....	22	....
1865	....	....	141	....
1866	....	... .	116	....
1867	....	....	647	.. ..
1868	....	....	2,584	....
1869	....	....	3,917	....
1870	1,475	2,607	4,082	....
1871	1,995	2,399	4,394	....
1872	3,470	2,001	5,471	....
1873	3,565	3,105	6,670	....
1874	4,087	4,453	8,540	....
1875	3,654	2,800	6,454	....
1876	3,524	3,231	6,755	99,430
1877	3,331	3,735	7,066	99,978
1878	2,949	4,489	7,438	104,192
1879	3,675	4,102	7,777	126,119
1880	4,465	6,506	10,971	121,616
1881	4,983	7,184	12,167	128,752
1882	6,362	7,176	13,538	169,192
1883	7,583	7,401	14,984	204,547
1884	6,997	10,520	17,517	105,323
1885	9,583	6,835	16,418	239,347
1886	5,915	9,202	15,117	167,959
1887	8,380	6,907	15,287	273,928
1888	4,997	10,284	15,281	110,218

Increase of area under crop.

The figures contained in the above table show the gradual progress of the sugar-growing industry, from the small beginnings of 63. From the starting point of this cultivation until 1884 there is no break in the yearly increase of land put under cane.

During the two succeeding years, however, there was a tendency to retrogression, and the area now cultivated is less by 2,586 acres, or nearly 34 per cent., than in 1884. It is probable that the low price of sugar and the disturbed state of the markets of the world during these years, forced the sugar manufacturers to correspondingly reduce the price offered for the canes, and so caused the abandonment of this cultivation by the small farmers, who found in the growth of maize less variable results for their labour. As sugar-cane is only cut every second year, the seasons of large production are followed by small crops in the immediately succeeding year. This will account for the alternately large and small areas of productive cane, which the preceding table shows. From plantations in full bearing the weight of cane cut varies from 25 to 32 tons, while the price paid ranges from 11s. to 13s. per ton, in addition to the cost of cutting, so that the annual yield is from £7 10s. to £10 per acre planted.

Low price of sugar.

Principal centres of sugar-cane cultivation.

The Richmond River electorate is now the principal centre of sugar-cane cultivation, and in 1888 there were 445 holdings, upon which areas, varying from 2 to 520 acres in extent, were devoted to this culture. The total area so planted was 8,835 acres, or over one-half of the whole area under cane in the Colony. The yield obtained from 3,322 acres of productive cane amounted to 77,648 tons, showing an average of 23·4 tons per acre.

On the Clarence River, in the electoral districts of Grafton and the Clarence, there were, in 1888, 419 holdings, on which cane was grown, the aggregate area under this crop being 6,275 acres. As in the Richmond River district, the majority of farmers cultivate sugar-cane in addition to other crops, and only a few estates are entirely devoted to its cultivation. Some planters have areas of from 25 to 100 acres in extent under cane, but their number is very limited. The yield in the Clarence and Grafton electorates was 30,431 tons, or an average of 19·1 tons per acre, cut on an area of 1,596 acres.

In the Macleay River district the area devoted to sugar-cane is now insignificant, only 165 acres having been returned in 1888 as under crop, of which 79 acres were productive.

Total crop of sugar.

The estates on which sugar-cane is grown number 891, and the hole crop of sugar-cane during the last season amounted to 110,218 ns, obtained from 4,997 acres, showing an average production of 2·06 tons per acre, which is 4·85 per cent. below the average of the rmer ten years. On the estates belonging to the Colonial Sugar-fining Company, the conduct of the business of the plantation s been entrusted to practical men, and no money spared to tain the most approved and complete plant for the manufacture sugar. This company's mills on the Richmond River are among e most complete in any part of the world, and the sugar manuctured is equal to the best Mauritius and West Indian samples. e quantity of sugar consumed in the Colony during the past o years amounted to 88,615 tons, of which 33,778 tons were e product of the local plantations; the area cut in these years ing 13,377 acres, so that to supply the whole of the sugar used New South Wales, would require the planting of about 20,000 ditional acres of cane.

VINES AND WINE PRODUCTION.

Markets for Australian wine.

In every part of the Colony, excepting the essentially subopical portion, and the higher parts of the mountain ranges, ape vines thrive well, and bear large crops of succulent fruit, ual in size, appearance, and flavour, to the most renowned roducts of France, the Rhinelands, and Spain; yet the vinerowing and wine manufacturing industries are still in their fancy in this Colony, although their prospects are as hopeful as uld be desired. With a demand which the present production rdly satisfies, and the opening up of a market in England, here New South Wales in common with other Australian wines ave obtained due appreciation, the future of vine-growing appears irly assured. The depreciation which French and other foreign vines have suffered, both in quantity and in quality, owing to the scourge of the phylloxera, is an additional reason for the vine-growers of New South Wales looking forward to a successful future for their industry. How small the present production of Australia is compared with the total of the world will appear from the following table:—

Production of Wine in the principal wine-growing countries of the world.

Country.	Production in million gallons.	Country.	Production in million gallons.
Australia	3	Roumania	18
Austria	92	Russia	92
Algeria	72	Servia	53
Cape Colony	5	Spain	608
France	795	Switzerland	29
Greece..........	46	Turkey and Cyprus	69
Hungary..................	185	United States	32
Italy	798		
Portugal	132	Total	3,029

Vine planted in early days.

The vine was planted in the early days of the colonization of New South Wales, but it was not until the year 1828 that vine-growing and wine-making may be said to have been fairly established. In that year Mr. Busby returned from Europe with a large collection of cuttings from the most celebrated vineyards of France, Spain, the Rhine valley, and other parts of the continent of Europe, and planted, on his estate in the Hunter River district, a vineyard which has been the nursery of the principal vineyards of the Colony. Some years afterwards the vine was planted in the Murray valley, and in other portions of the Colony, and was found to flourish so luxuriantly that the manufacture of wine received considerable attention. For a time, however, the prospects of this industry seemed very poor, and production diminished considerably, owing, partly, to the want of a market, and partly to the fact that the wine-makers, many of whom were not vignerons by training, possessed only a limited knowledge of the manufacture of wine, and produced at first an article of inferior and unsaleable quality. But in the principal vineyards of the Murray and the Hunter neither money nor pains were spared to introduce skilled labour and put up presses, vats, and other manufacturing appliances of the most approved pattern.

New South Wales wines at the Bordeaux Exhibition in 1882.

The results of this intelligent treatment became apparent, when prizes were awarded to the New South Wales wines at the Paris Exhibition of 1878, followed by an unbroken series of successes at the Exhibitions of Philadelphia, Sydney, Melbourne, and Amsterdam, and latterly at the Indian and Colonial Exhibition in London. But nowhere was the general excellence of the wines of New South Wales more fully recognized than at the Bordeaux Exhibition of 1882. There, in the principal centre of the wine trade of the world, the wines of New South Wales were classed by the most competent judges in the category of "Grands vins," and their value fully appreciated and established. The following statement shows the progress of the wine industry since 1862.

Progress of vine-growing.

Area under Grape Vines and Production of Wine.

Year ended 31 March.	Total area under vines.	Area under vines for wine-making only.	Production.	Average per acre.	Year ended 31 March.	Total area under vines.	Area under vines for wine-making only.	Production.	Average per acre.
	Acres.	Acres.	Gallons.	Gallons.		Acres.	Acres.	Gallons.	Gallons.
1862	1,130	562	85,328	151·83	1877	4,457	3,217	799,709	248·59
1863	1,460	795	144,888	182·25	1878	4,183	3,027	708,431	234·04
1864	1,641	880	136,976	155·65	1879	4,237	3,024	684,733	226·43
1865	1,849	945	161,299	170·69	1880	4,266	3,091	733,576	237·33
1866	2,126	1,243	168,123	135·25	1881	4,724	2,907	584,282	200·99
1867	2,281	1,358	242,183	178·33	1882	4,027	2,597	513,688	197·80
1868	2,532	1,483	285,283	192·37	1883	4,448	2,629	543,596	206·76
1869	3,117	1,917	412,587	215·22	1884	4,378	2,660	589,604	221·65
1870	3,907	2,039	460,321	225·75	1885	4,584	2,405	442,612	184·04
1871	4,504	2,371	342,674	144·53	1886	5,247	2,876	555,470	193·13
1872	4,152	2,466	413,321	167·61	1887	5,840	3,131	601,897	192·23
1873	4,090	2,568	451,450	175·80	1888	6,745	3,292	666,382	202·42
1874	4,547	3,183	578,985	181·90	1889	7,072	3,586	805,813	224·71
1875	4,308	3,077	684,258	222·37					
1876	4,459	3,163	831,749	262·96	Average for 28 years……				197·82

Increase of wine industry.

The above figures show that the wine industry has considerably increased during the twenty-eight years under examination, the total area planted being now six times what it was at the beginning of the period. The average yield per acre has also advanced; but this latter is probably due to the fact that in the earlier period the proportion of young vines not in full bearing was greater than is at present the case. The years 1875, 1876, and 1879 were the best of the series, the average production having in 1876 reached the large figure of 262·96 gallons per acre.

The phylloxera vastatrix.

The "phylloxera vastatrix," which has caused some damage in the vineyards of the neighbouring colony of Victoria, necessitating stringent legislative measures, has also appeared in some vineyards of the Camden and Seven Hills districts, but, so far, without causing any great ravages. A commission was appointed some time ago to report on the appearance of the disease, and the best means of preventing its spread. The prohibition of the importation of vine-cuttings from abroad has been in force for some time, and the destruction of infested vineyards is at present being carried out under the direction of the commission. The total number of wine growers in 1888 was 1,524, and the average area of each vineyard, was 4·64 acres.

Cultivation of table grapes.

The vine-growing industry is not, however, restricted to the cultivation of fruit for wine-making purposes; a considerable area is devoted to the cultivation of table grapes, principally in the neighbourhood of Sydney, and in the districts of Ryde, Parramatta, and other portions of Central Cumberland. The area so cultivated in 1888 amounted to 1,505 acres, producing 2,527 tons of grapes, or at the rate of 1·65 tons of fruit per acre. There were also 2,527 acres of vines yet in an unproductive state.

ORANGES.

First orangeries near Parramatta.

The cultivation of the orange has become one of the principal industries of the districts surrounding the metropolis. The first orange groves were planted near the town of Parramatta, and soon spread to the neighbouring districts of Ryde, Pennant Hills, Lane Cove, the whole of Central Cumberland, and the Hawkesbury and Nepean valleys. The production of oranges has already attained such proportions that the growers are obliged to seek markets abroad for the disposal of their produce, as the demand, both in New South Wales and the adjacent colonies, is largely exceeded by the supply. Efforts have been made of late to open up a market in England, as the fruit can be delivered in London at a time when the supply of oranges from Spain and other countries of the northern hemisphere has ceased.

State of orange growing in 1879.

The statistics relative to this branch of the agricultural industry are only available from the year 1878, when the area under crop was 4,287 acres, which last year had increased to 10,851 acres. Of the area just given 4,000 acres are planted with trees not yet in fruit, while the yield from the remaining area amounted to 19,694,000 dozen oranges, or rather more than 2,870 dozen per acre. It is usually estimated that over 5,000 dozen can be obtained in a fair season from trees in full bearing, so that it is therefore probable that the figures for 1888 included the return from a considerable number of young trees. The following shows the state of the industry in each year since 1879. The number of orangeries during 1888 was 1,615, and the average area being 6·72 acres.

Area of Orangeries, and production of Oranges.

Year ended 31 March.	Area of Orangeries.	Year ended 31 March.	Area of Orangeries.
	Acres.		Acres.
1879	4,287	1885	6,911
1880	5,106	1886	7,733
1881	5,939	1887	7,920
1882	6,301	1888	8,875
1883	6,716	1889	10,851
1884	7,268		

ORCHARDS AND GARDENS.

During the last ten years there has been very little alteration in the area under gardens and orchards. The cultivation of other varieties of fruit besides oranges and grapes appears to be retro-essing, instead of sharing in the progress observable in almost other branches of agriculture. Yet the Colony consumes ually very large quantities of imported fruit, which could be essfully grown within *its own limits.* Leaving out of con-

Large quantity of fruit imported.

Importation of fruit.

sideration the large importation of tropical fruit from Fiji, New Caledonia, and Queensland, some of which might be cultivated in the sub-tropical portion of New South Wales, the importation of other fruit is very considerable. Thus in 1888, Tasmania, New Zealand, Victoria, South Australia, and the United States, supplied New South Wales with green fruit to the value of £99,153, while other green fruit, mostly the produce of subtropical countries, was imported to the amount of £68,755. The importation of dried and candied fruit during the same period amounted to £103,006, and that of nuts to £7,788. New South Wales is therefore dependent on the outside world, to the extent of over one quarter of a million sterling, for fruit, which could be advantageously cultivated within its own territory.

The number of orchards during 1888-9 was 4,776, and the area 16,311 acres, so that the average area of each was 3·41 acres.

AGRICULTURAL IMPLEMENTS.

Agricultural implements.

A census of agricultural machines and other implements used in farming and cognate pursuits was taken in 1888, which showed the following as the number of the principal kinds used throughout the Colony.

	Number.		Number.
Bone mills	62	Sheep-washing machines.	50
Carts	54,807	Stills	93
Chaff-cutters	11,888	Turnip-cutters	134
Cheese-presses	895	Ploughs	42,822
Cheese-making machines.	292	Winnowing-machines	2,733
Corn-crushers	3,587	Strippers	2,650
Corn-shellers	7,881	Stump-extractors	340
Harrows	32,064	Wool-presses	2,616
Hay-presses	910	Wool-washing	141
Hay-making machines	268	Steam-engines	1,094
Hay-rakes (horse)	3,281	Reapers	1,666
Threshing-machines	511	Reapers and binders	1,094
Wine-presses	360	Seed-sowers and drills	730
Mowing-machines	4,075	Hay-cutting machines	543

The value of the implements and other articles mentioned in the above list is approximately £1,820,000, or about 36s. per acre of land cultivated.

PART XI.

Stock.

THE rapid settlement of the Colony has, in a great measure, been due to the fitness of its soil, vegetation, and climate, for the successful rearing of the principal species of stock which supply the wants of civilized men, and so largely contribute to the wealth of nations. For many years it was believed that a considerable part of Australia was quite unsuited for stock, and this opinion was fostered by the accounts of the earlier explorers, who reported that the interior of the continent was a vast desert. These apprehensions were soon dispelled, and the apparent difficulties offered to the successful rearing of stock disappeared before the energy of the colonists. One thing particularly favoured the settlers; though the number of native animals was very considerable, comprising chiefly marsupials of little commercial utility, there happily existed no large species of carnivora which could seriously interfere with the increase in the flocks.

Humble beginnings of stock breeding.

The beginnings of pastoral enterprise in the Colony were very humble. The whole stock of the community which accompanied Captain Phillip comprised only 1 bull, 4 cows, 1 calf, 1 stallion, 3 mares, 3 foals, 29 sheep, 12 pigs, and a few goats; and although the whole of the present flocks and herds of Australia have not sprung from these animals alone, it will be seen on how small a scale the business of stock-raising was first attempted. No systematic record of the arrival of stock seems to have been kept in the early days of settlement, but it appears that in the period between Governor Phillip's landing and the year 1800 there were some slight importations, chiefly of sheep from India. In 1803 the number of sheep in the Colony was set down at 10,157. In 1825, thirty-seven years after the establishment of the Colony, there were in New South Wales 6,142 horses, 134,519 cattle, 237,622 sheep, and 39,006 pigs. In 1842 there were 56,585 horses, 897,219

Separation of Victoria.

cattle, 4,804,946 sheep, and 46,086 pigs. As soon as the produce of stock began to exceed the demand for food, the increase in number became very rapid, and, at the separation of Victoria, the stock of the Colony numbered 13,059,324 sheep, 1,738,965 cattle, 132,437 horses, and 61,631 pigs.

Separation of Queensland.

The severance of Victoria, then the fairest province of the mother Colony, involved a loss of 6,589,923 sheep, 390,923 cattle, 20,086 horses, and 7,372 pigs; so that in 1851 the flocks of New South Wales numbered 6,469,401 sheep, 1,348,042 cattle, 110,351 horses, and 54,259 pigs. After the separation of Queensland the numbers of each kind of live stock within the existing boundaries of the Colony were 6,119,163 sheep, 2,408,586 cattle, 251,497 horses, and 180,662 pigs; in the following year the numbers showed a considerable decline, both from the effects of the season, and from the large demand which arose for stock for the stations of the new Colony; and in 1861 the figures were, 5,615,054 sheep, 2,271,923 cattle, 233,220 horses, and 146,091 pigs. From the numbers just given, the sheep had, at the beginning of 1889, increased to 46,503,469, the cattle had declined to 1,622,907, the horses had increased to 411,368, and the pigs to 248,583.

SHEEP.

Land suited for pastoral pursuits.

The suitability of the land discovered in New South Wales for pastoral pursuits was undoubtedly the means of leading the infant Colony to take its first step on the path of commercial progress; and it is not a little surprising at this distance of time how steadily some of the settlers, in the face of the almost insurmountable difficulty of transport which existed a century ago, availed themselves of the opportunities at their disposal. The importation of valuable specimens of sheep from England or the Cape of Good Hope, prior to the advent of steam, was at all times attended with great risk, and it frequently happened that many of these costly animals died during the tedious voyage. These enterprises were, however, on the whole successful, and thus the flocks and herds of the colonists surely, if at first slowly, increased and multiplied.

Captain Macarthur promotes wool-growing.

By the year 1795, Captain Macarthur, one of the first promoters of sheep-breeding in New South Wales, had accumulated a flock of 1,000, which were held in great estimation, and gradually increased in value, until, as recorded by an entry in his journal ten years later, the market price of a fat wether had risen to £5. Not satisfied with the natural increase of his flocks, Macarthur sought to improve the quality of his fleeces, by which means he could see opening before him the promise of great wealth, and the prospect of establishing important commercial relations with Great Britain. With these ends in view, he procured from the Cape of Good Hope, at great cost and trouble, a number of superior rams and ewes. A happy circumstance occurred which favoured his enterprise; for he had the good fortune to secure possession of three rams and five ewes of very fine Spanish breed, which had been presented by the King of Spain to the Dutch Government. These animals, out of a total of twenty-nine purchased at the Cape, arrived in Sydney in 1797, and were disposed of to various breeders. With the exception of Macarthur, however, those who had secured sheep of the superior breed made no attempt to follow up the advantage, being probably amply satisfied with the larger gains from the sale of an increased number of animals. Macarthur, on the other hand, thought little of present profits, and still less of breeding entirely for human consumption. He attentively watched the results of crossing his imported rams with the old stock, and by systematically selecting the finer ewes which were the offspring for further mingling with the sires, he gradually improved the strain, and in a few years obtained fleeces of very fine texture which met with the ready appreciation of English manufacturers.

Improvement of the flocks.

Spain formerly chief wool-grower.

Prior to the present century the production of the finest wool had been confined chiefly to Spain, and woollen manufactures were necessarily carried on in England upon a somewhat limited scale, which was not likely to improve in face of certain restrictions the operatives endeavoured to place upon their employers. These men, in support of their contention that the woollen trade could not be expanded, on account of the limited supply of the raw material, argued that fine wool was obtainable only in Spain; and it was at this favourable period that Macarthur arrived in England with specimens of the wool obtained from his finest sheep, conclusively proving the capabilities of Australia as a wool-producing country. In this way he opened up a small trade with English manufacturers, which, as Australian wool rose in public estimation, gradually increased until it reached its present enormous dimensions. During his visit to England, Macarthur purchased an additional stock of ten rams and ewes of the noted Spanish breed, nearly equal in quality to those which in 1797 he had procured from the Cape of Good Hope. That these animals were the finest obtainable in Europe may be gathered from the fact they also had formed portion of a present from the King of Spain to George III. Thus did Macarthur, after his return to the Colony, patiently continue for many years the process of selection, with such success, that in 1858, when his flock was finally dispersed, it was estimated that his superior ewes numbered fully 1,000. Victoria secured a considerable portion of Macarthur's flock, and the process of breeding proceeded simultaneously in that and other adjacent colonies.

Trade opened with Great Britain.

Importation of sheep.

Although the increase in the numbers of the finer sheep was satisfactory, the importation of superior stock was not discontinued and the stock of the colonies was augmented in 1823 and 182 by the further introduction of Spanish sheep. Sheep-breedin was about this period commenced in the Mudgee district, and th climate of that region has produced a still more favourable resul upon the quality of the fleeces than any other part of the Colony and it is thence that the finest merinos are now procured. A might have been anticipated, the climate of Australia has in som respects changed the character of the Spanish fleece. The woo has become softer and more elastic, and while having diminishe in density it has increased in length, so that the weight of th

Texture of wool.

as only slightly altered. The quality of the wool has thus whole improved under the beneficial influence of the climate, no further enhancement in its value can be reasonably hoped re is at least every reason to believe that Australian wool intain its present high standard of excellence.

Number of sheep in New South Wales.

following table, showing the numbers at the close of each ince the separation of Queensland, illustrates the progress p-breeding :—

Progress of Sheep-breeding.

Number.	Year.	Number.	Year.	Number.
6,119,163	1870	16,308,585	1880	35,398,121
5,615,054	1871	16,278,697	1881	36,591,946
6,145,651	1872	17,566,048	1882	36,114,814
7,790,969	1873	18,990,595	1883	37,915,510
8,271,520	1874	22,797,416	1884	31,660,321
8,132,511	1875	25,353,924	1885	37,820,906
11,562,155	1876	25,269,755	1886	39,169,304
13,909,574	1877	21,521,662	1887	46,965,152
15,080,625	1878	25,479,484	1888	46,503,469
14,989,923	1879	30,062,910		

Annual increase.

ratio of annual increase for the whole period is 8 per cent. d into three periods the ratios are—

1861–70 annual increase 12·6 per cent.
1870–80 ,, ,, 8·1 ,,
1880–88 ,, ,, 3·5 ,,

Natural law of increase.

operation of the natural law regulating the increase of , viz.—that the ratio of increase is inversely as the increase number of individuals—is only partially observable in these , though the tendency of the rate of increase to decline as mbers advance is clear enough.

Causes modifying rate of increase.

It is not possible to estimate the actual loss of sheep from drought and failure of grass, but an approximation can be made as to the number of stock in the Colony less than would have been the case had the seasons all been propitious. Thus the following table shows the expected increase of sheep after all causes of natural decrease are allowed for, the actual increase or decrease during each year, and the loss which may be attributable to the season. Under this last head are included not only the sheep which actually died, but also the expected increase from lambing which was not realized. Out of the fifteen years over which the information extends five years only showed no loss, or loss so slight as to be inappreciable. On the other hand, five seasons of opposite character were experienced in which not only was there no increase, but an actual decrease, on the numbers of the previous year, ranging from 84,000 in 1876 to 6,255,000 in 1884. The loss on the year last named reached the enormous total of 12,270,000, a number larger even than the total of the flocks in any colony of the group except New Zealand.

Loss of Sheep through Drought and kindred causes.

Year.	Expected increase, allowing for all causes of natural decrease.	Actual increase or decrease.	Loss through Seasons
	No.	No.	No.
1874	4,140,000	3,800,000	340,000
1875	3,536,000	2,556,000	980,000
1876	3,116,000	* 84,000	3,200,000
1877	4,642,000	* 3,748,000	8,390,000
1878	3,897,000	3,987,000	†
1879	4,560,000	4,580,000	†
1880	5,536,000	5,335 000	†
1881	6,460,000	1,190,000	5,270,000
1882	6,713,000	* 477,000	7,190,000
1883	6,560,000	1,800,000	4,760,000
1884	6,045,000	* 6,255,000	12,270,000
1885	6,160,000	6,160,000	†
1886	6,350,000	1,350,000	5,000,000
1887	7,795,000	* 7,795,000	†
1888	7,390,000	* 462,000	7,852,000

* Denotes decrease during the year. † No loss, or loss very slight.

Requirements of other colonies check increase.

After allowing for the causes which naturally impede the increase of the flocks of the Colony, the demands of the slaughter-yard, the requirements of the neighbouring colonies, and the deaths occurring from other causes than drought, it will be found that the rate of increase in any year should be about 20 per cent., so that the flocks of the Colony would increase two-fold in about four years. Actual experience shows that such rate of increase was only approached once since the year 1861. During the period of five years from 1861 to 1866 there was a two-fold increase; the flocks of the Colony were again doubled in the eight years from 1866 to 1874 and in the thirteen years from 1874 to 1887. How many sheep could be sustained by the Colony under a system of artificial feeding and watering may hereafter become a question of national interest, but it is abundantly plain that even with a continuation of fair seasons it would be impossible, under the present mode of depasturing stock, for the Colony to support for any number of years an increase of sheep similar to the record of 1887, as in four years' time the flocks would number 100,000,000, a total more than now found in all the colonies.

Export and import of sheep.

The export and import of sheep during the ten years, 1879–1888, is shown in the following table :—

Year.	Exported.	Imported.	Year.	Exported.	Imported.
1879	978,537	160,123	1884	1,942,204	404,371
1880	1,147,552	81,742	1885	1,237,155	1,134,439
1881	1,068,362	198,329	1886	1,247,514	288,225
1882	856,190	207,538	1887	1,218,504	864,313
1883	1,006,227	205,558	1888	2,327,406	254,018

Local demand formerly small.

e local demand for sheep for consumption was, until recent
so small compared with the supply as not to appreciably

affect the increase of the flocks of the Colony. Such, however, is not now the case, and the annual demand for slaughtering purposes is about 6 per cent. of the number of sheep depastured, and is, therefore, almost equal to half the annual cast. The question of the supply of sheep in the light of the possible demands of the future is dealt with elsewhere, and it will be seen that, enormous as are the numbers of stock in this and the neighbouring colonies, every year reduces the margin between the supply and demand.

Stock-carrying capacity of Colony.

The stock-carrying capabilities of the Colony are very difficult to estimate, as by far the greater portion of the country is yet in its natural state. Improvements, such as a better system of water conservation and irrigation, an intelligent extension of the salt-bush, cotton-bush, and other drought-resisting shrubs and natural grasses, and the cultivation of artificial fodder, are gradually being effected, and will indefinitely extend the capacity of the Colony for supporting stock of all descriptions.

Number of sheep in each colony.

The following table gives the number of sheep compared with the respective areas of the Australasian colonies, and shows the progress made by each in sheep farming:—

Colony.	Area in acres.	No. of sheep.	No. of acres per sheep.	Proportion of total number depastured in each colony.
New South Wales...	195,882,150	46,503,469	4·21	48·20
Victoria	56,245,760	10,805,682	5·20	11·20
Queensland	427,663,360	13,444,005	33·08	13·93
South Australia... ..	578,192,000	7,150,000	80·86	7·41
Western Australia...	624,588,800	2,112,392	295·67	2·19
Tasmania	16,880,000	1,430,065	11·80	1·48
New Zealand	66,710,400	15,042,198	4·43	15·59
Total	1,966,162,470	96,487,811	20·38	100·00

Colony stands first as sheep-breeder.

will be seen that New South Wales stands first of all the ies as a sheep-breeding country, both as regards the number s flocks, and the number of sheep depastured per unit of area. whilst Victoria has nearly reached the limit of its natural bilities in this particular direction, a considerable proportion s area being now devoted to agriculture, New South Wales has yet approached these limits. In Queensland, as in South tralia, sheep-breeding does not absorb the attention of pastoral- to the same extent that it does in New South Wales. The

Certain colonies adapted for cattle.

ier colony is more adapted to the breeding of cattle; whilst in southern and more settled districts of South Australia greater ntion is paid to the cultivation of cereals, its northern terri- y, like that of Queensland, being more adapted by nature to breeding of cattle and horses. Western Australia is at present he early stage of its colonisation; much of its area is still known, and it is therefore impossible to estimate its future as heep-breeding country. It may, however, be surmised that the thern portion of its immense territory will, in time to come, stocked with sheep, whilst the northern portion will probably found more suitable for the breeding of cattle and horses, on ount of its resemblance to portions of Queensland and the thern territory of South Australia situated under the same itude. It was thought at one time that cattle-breeding would upy a position in New South Wales equal to that of sheep- eding, but experience has shown that the general climatic litions are more favourable to sheep than cattle, and the Colony probably destined to remain, as it now is, the great sheep- eding centre of Australia.

Country not all fitted for sheep.

he different degrees of success attending sheep farming in rent parts of the country has long since directed attention to fact that each part of Australia is not equally fitted for the luction of fine wools. New South Wales may be divided atically into four zones:—(1) The coast country extending from the seaboard to the main range, the breadth of which vari from 20 to 100 miles; (2) the table-land districts on the summ of the range; (3) the upper part of the western slopes; and (the interior, or "salt-bush country."

Seaboard not suited to merino.

The climate of the eastern seaboard for a considerable distan inland is too moist, and a large portion of it too poor, for t adequate sustenance of merinos, but it is probable that the coars breeds of sheep would not deteriorate through the limited fo supply and the rugged nature of the country. On the Hunt and other northern rivers, and in the southern coast distric where the soil is very rich, dairy-farming and agriculture are t leading, and, no doubt, the most profitable, industries. Shee breeding is carried on to some extent in the regions towards t summit of the coast range; but, as in the case of the countr near the sea, the soil as a rule is unfavourable to sheep. O crossing the coast range, however, the contrast between t aspect of the country just entered, and that left behind, is ve striking. Here the grazing and wool-growing capabilities are once apparent, and further to the westward a still greater impro ment is visible.

Riverine country.

In the abundant pastures of the Riverine districts the wool less fine than in the country immediately west of the table-lan but the fleeces are generally sound and heavy. Further in t salt-bush country the wool suffers both in the weight of the fle and in its quality; but the country is fattening, and the stock a generally more healthy than nearer the sea. In the country the further side of the Darling the great summer heat is adver to the production of heavy fleeces; but even here a fair class wool is produced, as the stock-owners are constantly introducing fresh blood and so counteracting the tendency toward the degeneration of the breed of sheep which might otherwis ensue.

Importation of stud sheep.

The importation of stud sheep from foreign countries, notably France, Germany, and America, which was continued for many years after the superfine quality of Australian wool had been established in the markets of the world, practically ceased even before importation was legally prohibited; for it had become apparent that the fleece, instead of showing signs of deterioration under the influence of the climate, had, on the whole, a tendency to improve. The introduction of sheep and cattle into New South Wales was forbidden for many years, owing entirely to the fear of the stock-owners that their herds would be contaminated by scab and other diseases prevalent in European flocks; but these restrictions were removed at the beginning of the past year, and 497 pure bred sheep, comprising 456 American merino, 29 French merino, and 12 South Downs reached the Colony in 1888, in addition to 4,339 bred sheep from other parts of Australia.

Superiority of Australian wool.

It is now generally admitted that as far as the fleece is concerned the Australian merino has little to gain by any further admixture of European or American blood, but it is equally admitted that there is room for improvement in the physique of the animal. To produce a larger carcase, without interfering with the quality of the fleece, many experiments have been made, but without much success, and it has been found that the crossing of noted breeds of English rams with Australian ewes has invariably resulted, after a generation or two, in a deterioration of the merino. The breeding of sheep for consumption, and for the sake of the wool, has, therefore, developed naturally into two distinct fields of industry.

Breeds of sheep.

The various breeds of sheep in the Colony are the Merino, Lincoln, Leicester, Downs, and Romney Marsh, and crosses of the long-woolled breeds, principally with the merino. In 1888–9 the respective numbers of merino and long-woolled sheep cross-breeds, stood thus :—

Merino	45,570,705
Long-woolled sheep	407,739
Cross-breeds	525,025
Total	46,503,469

Subdivided as per following table :—

MERINO.

Combing.

Sheep.	Rams.	Ewes.	Wethers.	Lambs.	Total.	
			Superfine.			
Pure and stud	46,755	573,657	135,258	263,155	1,018,825	
Ordinary	89,192	2,128,233	1,449,331	1,149,274	4,816,030	
						5,834,
			Medium.			
Pure and stud	79,559	1,297,765	478,137	595,203	2,360,664	
Ordinary	166,689	6,586,123	3,938,508	2,887,870	13,579,190	
						15,939,
			Strong.			
Pure and stud	50,333	893,902	512,086	422,147	1,878,468	
Ordinary	91,971	4,395,539	2,472,674	1,608,867	8,569,051	
						10,447,
Total, *Combing*					....	32,222,
			Clothing.			
			Superfine.			
Pure and stud	12,168	252,316	124,517	131,102	520,103	
Ordinary	25,994	655,037	533,573	309,243	1,523,847	
						2,043
			Medium.			
Pure and stud	24,027	331,637	217,104	176,946	749,774	
Ordinary	62,862	3,253,122	1,740,470	1,305,355	6,361,809	
						7,111
			Strong.			
Pure and stud	24,033	376,091	220,258	168,986	789,368	
Ordinary	44,393	1,617,892	1,091,573	649,718	3,403,576	
						4,192
Total, *Clothing*					....	13,348
Total number of MERINO SHEEP......					....	45,570

LONG-WOOLLED SHEEP.

Sheep.	Rams.	Ewes.	Wethers.	Lambs.	Total.	
			Lincoln.			
e and stud	3,090	31,460	25,836	21,247	81,633	
inary	3,878	66,350	45,838	31,248	147,314	
	Total				....	228,947
			Leicester.			
re and stud	3,387	26,244	24,393	17,010	71,034	
dinary	2,403	27,407	19,565	17,413	66,788	
	Total				.. ..	137,822
			Downs.			
re and stud	778	4,530	2,149	2,833	10,290	
dinary	1,045	7,251	7,546	4,361	20,203	
	Total				....	30,493
			Romney Marsh.			
re and stud	118	2,007	90	523	2,738	
dinary	400	2,000	3,400	1,939	7,739	
	Total				....	10,477
	Total number, LONG-WOOLLED SHEEP					407,739
	CROSSES—Long-woolled with Merino principally.					
sses.........	1,607	202,447	188,039	132,932	525,025	
						525,025
			Grand total............................			46,503,469

The sexes and classes of sheep were estimated as follows :—

Rams	734,742
Ewes	22,641,010
Wethers	13,230,345
Lambs	9,897,372
	46,503,469

The climate of New South Wales admits of stock of all kinds ng left in the open air, and there is no necessity for housing m during the winter months. The sheep are either kept in

No necessity for housing stock.

paddocks or under the care of shepherds, though on some stati they are both shepherded and paddocked.

Paddocked	44,747,383
Shepherded	1,108,774
Paddocked and shepherded	647,312
	46,503,469

Percentage of lambing.

It will be seen that a very large majority of the sheep are k in paddocks. This system enables a large saving to be effect and, at the same time, facilitates the general management of t runs. The fencing of sheep runs has also a great tendency improve the stock. They not only get fatter when allowed to r loose in paddocks of moderate size, but also yield finer fleeces th when subject to constant rounding up by dogs, which accompani the shepherding of flocks. Another advantage of the paddo system is that the percentage of lambs obtained under it is great than among shepherded sheep, in some years the difference bei as great as 15 per cent. The general average of lambs is abo 72 per cent. of the ewes put to the rams; the season of 1888 wa however, very much below the average; for paddocked sheep, t returns give 54·5, and for shepherded sheep, only 39·5 per cent.

WOOL.

The wool clip.

The weight of the wool clip varies considerably from year year, and averaged slightly less during 1888 than in the pr ceding year. The amount of wool exported during the twel years from 1877 to 1888 is shown below, the quantities repr senting the weight of clip if the sheep were shorn in the grea As the season for exporting wool does not wholly fall within t calendar year, the quantities stated for any year partly refer that and to the previous year.

Year.	Amount of Wool.	Year.	Amount of Wool.
	lb.		lb.
1877	122,152,601	1883	216,681,214
1878	141,560,140	1884	201,899,941
1879	149,293,186	1885	193,775,478
1880	181,766,451	1886	203,013,090
1881	161,740,362	1887	256,072,430
1882	171,019,915	1888	269,739,000

Different systems of preparing the clip.

Various systems of preparing the clip for export obtain in different parts of the Colony, but by far the larger number of sheep, perhaps 90 per cent., are shorn in the grease. During 1888 the weight of wool obtained from sheep shorn in grease was 5 lb. $6\frac{1}{2}$ oz.; from creek-water washed sheep, 3 lb. $1\frac{1}{3}$ oz.; and from sheep scoured, 2 lb. $9\frac{1}{2}$ oz.; lambs averaged 1 lb. 11 oz. of wool in the grease, and 1 lb. 7 oz. when washed. Experience has shown what are the profitable limits within which washing wool on the sheep may be attempted; and where washing is advantageous there has been no lack of enterprise in obtaining the plant necessary for the work.

Proportion of home-shipped wool increasing.

Owing chiefly to the construction of railways into the interior of the Colony the proportion of wool which is shipped from the ports of the Colony has largely increased in recent years; a very large amount, however, is still sent to Melbourne and Adelaide for shipment to Europe. The following table shows the shipments of wool produced in New South Wales from the ports of the three neighbouring colonies, as well as from the ports of this Colony.

Quantity of New South Wales Wool Exported.

Year.	N.S. Wales ports.	Victorian ports.	S. Australian ports.	Queensland ports.	Total.
	lb.	lb.	lb.	lb.	lb.
1877	65,024,631	54,196,363	2,281,048	650.559	122,152,601
1878	68,949,633	55,496,732	16,785,661	328,114	141,560,140
1879	81,629,754	56,604,967	10,472.908	585,557	149,293,186
1880	100,506,949	65,892,226	11,927,018	440,258	178,766,451
1881	97,049,455	58,568,909	5,673,787	448,211	161,740,362
1882	96,927,768	52,259,856	21,257,679	574,612	171,019,915
1883	146,450,042	53,374,727	16,129,452	726,993	216,681,214
1884	133,570,339	46,239,608	21,658,427	431,567	201,899,941
1885	138,581,706	46,206,250	8,583,408	404,114	193,775,478
1886	128,299,245	50,229,330	24,170,392	314,123	203,013,090
1887	171,396,329	61.288,355	23,267,181	120,565	256,072,430
1888	201,630,000	61,541,000	6,540,000	28,000	269,739,000

The weights given above are on the assumption that all the wool was shipped in the grease. When washed wool has been shipped the weight of greasy wool required to give the quantity of washed wool has been estimated and included.

Wool shipped *viâ* Adelaide.

The amount of wool sent by way of Adelaide is especial affected by the state of the Darling River, increasing or diminis ing as the river is navigable or not, during the wool season. Th Murrumbidgee and Darling Rivers were not navigable during t wool season of 1888, and a larger proportion cf wool found i way to New South Wales ports than in any previous year, whi the total quantity was also greater. The proportion of the tot clip reaching New South Wales ports compared with what w despatched by way of Melbourne, Adelaide, and Brisbane was—

Year.	Percentage shipped from New South Wales ports.	Percentage shipped fro other ports.
1877	53·23	46·77
1878	48·71	51·29
1879	54·67	45·33
1880	56·22	43·78
1881	60·00	40·00
1882	56·67	43·33
1883	67·59	32·41
1884	66·15	33·85
1885	71·52	28·48
1886	63·14	36·86
1887	66·90	33·10
1888	74·75	25·25

Wool will continue to be shipped from Adelaide and Melbourne.

Under any circumstances a large part of the wool clip of Ne South Wales must find its way to Adelaide and Melbourne. The ports are not only geographically nearer to the pastoral distric than Sydney, but communication with them is easier and le costly, especially when the Murray and Darling waters are na gable. It is probable, however, that with the extension of t trunk lines of railway some additional portion of the interi traffic will come to Sydney and Newcastle; but the limit with which further extension may be possible will probably very so be reached.

VALUE OF THE WOOL CLIP.

Wool the most important export.

The wool clip of Australasia is its most important item of p duction, and it may be said that the prosperity of the colonies a large measure depends upon the state of the wool market.

Weight exported.

The statistics of the wool trade of New South Wales since the year 1860, when the Colony was for the last time subdivided, and lost its northern province of Queensland, will afford interesting matter for examination. The following table summarises the state of the export trade of New South Wales in wool during the period 1860–1888, and illustrates the growth of that important industry during nearly thirty years; whilst, at the same time, the fluctuations in the value of the clip may be easily followed. The weights given represent the actual exports, washed and greasy wool being taken together.

The Wool Trade.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	lb.	£		lb.	£
1860	14,962,362	1,454,289	1875	87,534,280	5,651,643
1861	18,171,209	1,768,978	1876	100,736,330	5,565,173
1862	20,988,393	1,801,186	1877	102,150,246	5,256,038
1863	15,842,520	1,316,520	1878	111,833,017	5,723,316
1864	25,827,917	2,294,615	1879	123,710,450	6,491,198
1865	29,858,791	2,283,560	1880	154,871,832	8,040,625
1866	36,980,685	2,830,348	1881	139,601,506	7,149,787
1867	21,708,902	1,711,322	1882	146,221,182	7,433,091
1868	25,721,632	1,879,751	1883	188,161,710	9,598,761
1869	51,269,672	3,162,522	1884	173,986,303	8,953,100
1870	47,440,610	2,741,141	1885	168,151,659	7,246,642
1871	65,611,953	4,748,160	1886	173,985,640	7,028,596
1872	50,233,453	3,342,900	1887	216,450,342	8,911,155
1873	31,606,846	2,201,910	1888	235,938,426	9,120,868
1874	75,156,924	5,010,125			

Effect of price of wool on national prosperity.

An examination of the preceding figures at once shows how greatly the fluctuations in the value of the staple article of export affect the national prosperity. The exports for the years 1884 and 1886, for instance, which may be taken as practically equal in quantity, represented a value of £8,953,1 in the former year, whilst in the latter year their value v reduced to £7,028,596. In this particular case the figu exhibit a double loss—in the quantity, and in the value of produce exported. In 1884 the export per capita was equival to 229·2 lb. of wool weighed in the grease. Had the quant of wool exported in 1886 been in proportion to the increased po lation, the figures would have stood at 224,613,000 lb., instea 203,013,000 lb. actually exported. Thus the loss suffered quantity amounts to 21,600,000 lb. The actual difference in va of the two clips against 1886 amounts to £1,924,504; but if this sum be added the value of the quantity which the Col failed to export in that year, it will be found that the proceed the export of wool in 1886 were actually shorter by £2,929, than would have been realised had the prices and yield of 1884 b maintained. Again, comparing 1883 with the past year, there a difference in quantity in favour of 1888 of nearly 53,058,000 and had the prices of 1883 been obtained the value of the 1 clip would have exceeded that of the former year by £2,826,3 instead of being £460,000 less, as was actually the case. transactions of 1888, though much more satisfactory than th of the preceding year, both as regards quantity and value of c compare very unfavourably with 1883 in respect to the aver price obtained.

Fluctuation in value.

The preceding table also shows that, although during the pe under examination the value of wool has greatly fluctuated f one year to another, the tendency to a settled diminution of p is unfortunately too clearly discernible. In order to furt illustrate the fluctuations in the value of this staple in the Lon market during the last ten years, the classification into scoured greasy wool has been adhered to, and the following table will an accurate idea of the average value realised for these two cla of wool during the last period of ten years. The values given w those ruling at the five principal sales of each year.

Average Value per lb. of New South Wales Merino Wool in the London Market.

Sales.	1879.		1880.		1881.		1882.		1883.	
	Scoured.	Greasy.	Scoured.	Greasy.	Scoured.	Greasy.	Scoured.	Greasy.	Scoured.	Greasy.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
1st Series	16½	9½	19	12½	18	11	18½	11	18	10
2nd "	17	10	19	14	18½	11½	19	11	18	10
3rd "	16	9	19	12	18½	11½	19	10½	17	9½
4th "	17½	10½	19½	12	18	11	18½	10½	17½	9½
5th "	18	11	19½	12	18½	11	18½	10½	17½	10

Sales.	1884.		1885.		1886.		1887.		1888.	
	Scoured.	Greasy.	Scoured.	Greasy.	Scoured.	Greasy.	Scoured.	Greasy.	Scoured.	Greasy.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
1st Series	16½	9½	16	9	13	7½	16	9¾	14	8
2nd "	16½	9½	15½	8½	12	6½	15½	9¼	15	8½
3rd "	16½	9½	14½	7½	14½	8½	15¼	9	16	8½
4th "	17	10	13½	8	16½	10	14¾	8½	17½	9
5th "	16½	9½	13½	8	14	8½	14¾	8¼	17½	9½

Maximum price obtained in 1880.

During the period covered by the foregoing table scoured Sydney-shipped wool fluctuated between a maximum of 19½d. per lb. and a minimum of 12d.; and greasy wool realized from 6½d. to 14d. The maximum prices for both descriptions of wool were realized during 1880, when the sales opened at 19d. and 12½d. per lb. respectively. Prices were fairly well maintained in 1881 and 1882, but they began to decline rapidly until the lowest market was reached in the early part of 1886, when scoured wool realized as little as 12d., and greasy 6½d. per lb. Since 1886 there has been a much better market for all kinds of wool, the average price of unwashed ranging between 8¼d. and 9¾d. in 1887, and 7½d. and 10d. in 1888. The sales for 1889 also show an upward movement, the quotations at the close of June being 10d. per lb. for greasy, and 17d. for washed, wool, a very material advance on the figure of three years previously. The state of the wool market

Fluctuation of prices of wool.

may therefore be pronounced satisfactory, though a return to the extremely prosperous years of 1871 to 1875, when scoured Sydney-shipped wool obtained as much as 26½d., and greasy wool 15d. per lb., is very doubtful. With the present markets, however, there is no cause to view unfavourably the further extension of the production of wool in these colonies. In the ancient seats of wool-growing, production is now stationary, and in some of the areas recently devoted to this industry, many causes, both climatic and otherwise, are likely to offer serious checks to its extension, while population and the consequent demand for wool is everywhere increasing. Nevertheless, it seems certain that unless fresh avenues are open to the wool industry in those countries where its use is comparatively unknown, it would be hopeless to expect a marked rise in the value of the article. The establishment of a market for Australian wool among the teeming populations of China and Japan, where the nature of the climate itself points out the value of wool as an article of clothing, is an object towards which the intelligent glance of the statesmen of Australia might well be directed.

China and Japan as a market for wool.

Combing and clothing wool.

It is a moot question as to whether the climate of New South Wales is more adapted to the production of a combing than a clothing wool. Although the former is looked upon with most favour by wool growers, it is generally recognised that there are very large tracts of country, especially where the salt-bush predominates, on which it is difficult to raise a good combing wool, and where it will probably be found more profitable by wool growers to give greater attention to the cultivation of the clothing variety.

Coarse-woolled sheep.

The breeding of coarse-woolled sheep, for the metropolitan market, is confined chiefly to the districts along the coast. The stock raised for this purpose are principally of the Leicester and Lincoln breeds, the latter being perhaps the greater favourite as a producer of fat lambs. There is no doubt but that, cultivated solely as an article of food, the coarse-woolled sheep is quite as profitable as the merino.

Wool clip of Australasia.

The quantity and value of wool, the produce of each of the various colonies of Australasia, grown during the year 1888, will be found below.

Colony.	Quantity—Greasy Wool.	Value.
	lb.	£
New South Wales	269,739,000	9,120,868
Victoria	61,436,285	2,467,000
Queensland	72,000,000	2,400,000
South Australia	39,000,000	1,170,000
Western Australia	11,600,000	348,000
Tasmania	9,300,000	400,000
New Zealand	90,000,000	3,425,000
Total	553,075,285	19,330,868

Value of clip.

The estimated value of the wool grown in each colony may appear anomalous, when the weight of the clip only is considered; it must be borne in mind, however, in comparing the weight and value of this staple, that there is a wide margin of difference in the average value of the wool grown in one colony and that grown in another.

Consumption of wool.

The quantity of wool consumed by the manufacturing nations of the world amounted in 1887 to 1,872,000,000 lb. weighed in the grease. Of this quantity 930,000,000 lb., or scarcely half, was grown in the various countries engaged in manufacturing, and of the balance 530,000,000 lb., or about 56·8 per cent., was Australasian. The consumption of wool was thus distributed:—

	Home production.	Imports.	Total consumption.
	lb.	lb.	lb.
United Kingdom	134,000,000	258,000,000	392,000,000
Continental Europe	450,000,000	580,000,000	1,030,000,000
North America	346,000,000	104,000,000	450,000,000
Total	930,000,000	942,000,000	1,872,000,000

Principal wool consuming countries.

During the past ten years a considerable change has taken in the markets available for the shipment of wool; the U Kingdom is no longer the first amongst wool-manufacturing tries, though its consumption of imported wool is still equal tc per cent. of the total wool imported. The relative positions United Kingdom, America, and continental Europe as woo sumers during the past ten years may be gleaned from the foll table:—

Year.	United Kingdom.	Continental Europe.	North America.	Grand T
	lb.	lb.	lb.	lb.
1878	352,000,000	905,000,000	259,000,000	1,516,0
1879	321,000,000	889,000,000	312,000,000	1,522,0
1880	370,000,000	882,000,000	381,000,000	1,633,0
1881	320,000,000	952,000,000	355,000,000	1,627,0
1882	357,000,000	969,000,000	385,000,000	1,711,0
1883	340,000,000	969,000,000	418,000,000	1,727,0
1884	381,000,000	1,017,000,000	422,000,000	1,820,0
1885	365,000,000	1,021,000,000	444,000,000	1,830,0
1886	418,000,000	1,033,000,000	460,000,000	1,911,0
1887	392,000,000	1,030,000,000	450,000,000	1,872,0

Wool-producing countries.

An exact estimate of the produce of the various countries world cannot be given, but sufficient information is obtai from which the relative importance of the different prod areas may be determined for the year 1887–8.

Producing areas.	Sheep.	Product Clean w
		l
Europe	187,000,000	400,0
Asia	37,000,000	100,0
Africa	29,000,000	58,0
North America	47,000,000	168,0
South America (excluding Brazil)	101,000,000	120,0
Australasia	96,480,000	307,0
	497,480,000	1,153,0

CATTLE.

Cattle breeding

Though still a most important industry, cattle-rearing does not ow occupy so prominent a place as formerly. In 1861 the value of e horned cattle depastured in the Colony was about £7,000,000, hile that of the sheep was not more than half this sum. In 88 the relative positions of the two classes of stock had entirely anged; for, while the cattle were valued at £8,000,000, the eep were worth £17,500,000, notwithstanding that in the terval cattle had considerably risen in value, and sheep had preciated. The number of cattle returned during each year since 61 is shown in the subjoined table, and it will be noticed how eat has been the decline in the totals since 1875.

Number of cattle declining.

Year.	Number of cattle.	Year.	Number of cattle.
1861	2,271,923	1875	3,134,086
1862	2,620,383	1876	3,131,013
1863	2,032,522	1877	2,746,385
1864	1,924,119	1878	2,771,583
1865	1,961,905	1879	2,914,210
1866	1,771,809	1880	2,580,040
1867	1,728,427	1881	2,597,348
1868	1,761,411	1882	1,859,985
1869	1,795,904	1883	1,640,753
1870	2,195,096	1884	1,425,130
1871	2,014,888	1885	1,317,315
1872	2,287,660	1886	1,367,844
1873	2,794,327	1887	1,575,487
1874	2,856,699	1888	1,622,907

Substitution of sheep for cattle.

If the above figures be compared with the returns of sheep for e same period, it will be found that the change which has taken ce in the class of stock has been most remarkable. It is very batable whether the substitution of sheep for cattle will in the d prove advantageous to the State, though there does not appear be any doubt that sheep-breeding is at present more profitable the individual owner. The increase in the number of cattle astured in the Colony during 1888 was 47,420; but since 75 there has been a decrease of 1,511,179. The unfavourable season of 1888 did not affect the cattle districts so severely as other parts of the Colony, and though the increase of stock was small it may, in connection with the increases of the three previous years, be taken as evidence of the disposition of the pastoralists in some parts of the Colony to revert to cattle breeding in place of sheep.

Loss from failure of water and grass.

An exact statement of the loss of cattle from failure of water and grass can only be made for about six years, and of these years three showed an actual decrease on the figures of the previous year, the year 1887 being the only one of the series which could be considered favourable to stock. Estimating at the low figure of £5 a head, the loss in 1883 was equal to £2,378,000, and in 1884 to £2,000,000. Since the year last named the losses of the stockholders have not been so serious, and in 1887 there was comparatively little to complain of. The following statement shows the increase in the numbers of cattle which would have occurred had the seasons been favourable, and also the increase or decrease actually experienced :—

Loss of Horned Cattle through Drought and kindred causes.

Year.	Expected Increase, allowing for all causes of natural decrease.	Actual Increase or Decrease.	Loss through Seasons.
	No.	No.	No.
1883	256,500	*219,200	475,700
1884	185,950	*215,600	401,550
1885	133,100	*107,800	240,900
1886	169,200	50,500	118,700
1887	217,300	207,600	9,700
1888	94,200	46,400	47,800

* Denotes decrease during the year.

Principal breeds.

The principal breeds of cattle now in the Colony are the Durham or Shorthorns, Hereford, Devon, Ayrshire, Alderney, and crosses

Principal breeds of cattle in Colony.

n these various breeds. At the close of the year 1888 the bers of each breed, as far as could be ascertained, were :—

Shorthorns—Pure and stud	40,935	
Ordinary	603,966	
		644,901
Hereford—Pure and stud	20,692	
Ordinary	197,587	
		218,279
Devon—Pure and stud	8,042	
Ordinary	54,051	
		62,093
Black-polled—Pure and stud	319	
Ordinary	1,169	
		1,488
Ayrshire—Pure and stud	1,776	
Ordinary	3,882	
		5,658
Others—Pure and stud	438	
Ordinary	449	
		887
Crosses—First	3,671	
Ordinary	685,930	
		689,601

The cross-breeds were estimated as follows :—

Shorthorn and Hereford	226,555
Shorthorn and Devon	71,398
Hereford and Devon	42,332
Shorthorn and black-polled	2,724
Ayrshire, &c., and shorthorn	5,182
Unrecognizable	341,410
	689,601

"Cast" of cattle.

The number of fat cattle which will be available for market ring the year 1889 is estimated to be about 225,000 head. his number is certainly very high, if the produce of the herds of e Colony be alone considered. The cattle trade with Queensland however, very considerable, especially in store cattle sent to is Colony for fattening; these serve to swell the nominal cast of e herds of the Colony to the figures given above. If the produce the Colony alone be reckoned, the cast for the year 1888 was 0,000 fat cattle, and the cast for 1889 will probably be 195,000 ad.

Breed of cattle improving.

The breed of cattle throughout the Colony is steadily improving, esult due to the introduction of good stud stock, as well as the rcised in selection. Cattle are for the most part kept in paddocks, and of the total number in the Colony 1,230,987 ar paddocked, 224,000 are in open runs, and the remainder, 167,92 are depastured both ways.

Pure bred cattle imported.

During the year 1888, 412 pure bred catttle, 140 bulls an 272 cows, were imported, chiefly from the other colonies of th group. Importations from Europe and America were prohibite for many years, owing to the natural dread of the stock owne lest their herds should contract diseases which have devastate the cattle of other countries. The prohibition was removed i 1888, and cattle are now admitted after strict quarantine.

Cattle of the world.

Compared with the other countries of the world the importan of Australia is not so manifest in the case of cattle as in that o sheep. The following are the numbers of cattle estimated from the most recent returns available :—

Europe	97,000,000
Asia	70,000,000
Africa	4,000,000
North America	55,000,000
South America	58,000,000
Australasia	9,250,000
Total	293,250,000

MEAT SUPPLY.

Food supply of the colonies.

The magnitude of the pastoral interests of Australia, and the existence of a large surplus of stock have served to divert attention from the question of the permanence of that surplus. The matter is not one of merely abstract importance, but has a practical bearing on the question of the food supply of these colonies, as well as of the possibility of the continued export of meat to the markets of the Old World. In dealing with this question it will be necessary to consider not only New South Wales but the whole of Australia. The advisability of so treating the stock of the colonies must be apparent, when it is borne in mind that the constant crossing and recrossing of flocks and herds from one colony to another for breeding, fattening, or other purposes entirely destroy the value of any set of figures relating to on colony, as distinct from the whole group. This is especially the case in considering the important question of the cast, or percentage of stock available for market during each year. In a purely fattening country the cast will appear very high, and on breeding stations correspondingly low. A combination of all classes of runs will alone give true results, and this can only be obtained by considering the whole of continental Australia as if it were one run. In the following computations New Zealand and Tasmania have been excluded, the figures given referring only to the Continent.

Effect of increase of population.

The people of Australia, in ordinary years, consume by far the larger part of the meat produced in the country, and even in the most abundant seasons, the surplus exported forms but a small portion of the total quantity produced. The ratio at which population tends to increase is, therefore, an important element in this question. The population of the colonies increased at the rate of 9·15 per cent. for the ten years 1871–81, but the increase was much more rapid towards the close of this period than in the earlier years. Since 1881 the rate has slightly exceeded 4·07 per cent., and for the coming decade the proportion may be taken as four per cent. per annum.

Increase of stock.

The yearly increase from births is approximately 30 per cent. of the total number of stock depastured, while the natural decrease, that is to say, the local food requirements and the deaths from other causes than epidemic diseases and droughts—may be taken as averaging 12·5 per cent. for sheep and 14·5 per cent. for cattle. If there were, therefore, no losses from epidemics and drought, the flocks of Australia would show a yearly increase of 17·5 per cent., and the herds 15·5 per cent. Unfortunately, the maximum ratio, just given for sheep has only been approached during four years since 1863, namely, 15·4 per cent. in 1866, 15·9 per cent. in 1867, 16·1 per cent. in 1880, and 17·5 in 1887. The possible rate of rease in cattle—15·5 per cent.—was only approached in three rs—1870, 1873, and 1887, when the ratios were 14·4, 16·6, 10·9 per cent. In all other years there have been losses, both in sheep and cattle, of greater or less magnitude, the most fatal year being 1884, when not only was the expected increase entirel lost, but there was also a decrease of 8,300,000 sheep an 130,000 cattle, making the total loss more than 20,000,000 shee and 1,300,000 cattle. During the twenty-five years which ende with 1887, the whole expected increment of sheep was lost in fiv years—1869, 1871, 1876, 1877, and 1884, while as regards cattl the colonies had a similar experience in nine years.

Ratio of increase

The ratio at which the flocks and herds of Australia tend t increase is, therefore, a very doubtful item. An inspection of th returns will show that there was a decrease in cattle year by yea from 1881 to 1886, and a somewhat similar decrease in sheep from 1883 to 1886. The following table gives the number of stock in five-year periods since 1863, not for any individual year but the average of the five years named :—

From	To	Average Number of Sheep.	Average Number of Cattle.
1863..................	1867	29,725,925	3,625,526
1868..................	1872	39,482,986	4,017,818
1873..................	1877	47,828,539	6,056,523
1878..................	1882	58,277,494	7,361,412
1883..................	1887	68,282,577	7,458,841

The mean annual increase for the above periods was :—

From	To	Sheep.	Cattle.
1863–1867	1868–1872.........	5·84 per cent.	2·08 per cent.
1868–1872	1873-1877.........	3·91 ,,	8·55 ,,
1873–1877	1878–1882.........	4·03 ,,	3·98 ,,
1878–1882	1883–1887.........	3·22 ,,	0·26 ,,

Irregularity of increase.

If there were any regularity in the above the rate for the la period would naturally be preferred as indicating the probab future consumption. There is, however, not only no regularity, but the rates are conspicuously irregular. As regards sheep, the rate for the first five years—5·84 per cent.—is obviously high and not likely to be again experienced over any considerable number of years. The last three ratios are more regular, and it has appeared preferable to adopt the mean annual increase from 1873–1877 to 1883–1887 as the probable rate at which the sheep of Australia are likely to increase. This ratio is 3·62 per cent. per annum.

Ratio of increase of cattle.

With respect to cattle the case is very different, and the adoption of any figure is not a matter of calculation but of opinion; 1 per cent., which is the mean rate of increase since 1880, is about the ratio which would fit the present conditions of these colonies, but, as will presently appear, the question is not very greatly affected even if 2·5 per cent. be taken as the prospective rate.

Consumption of meat.

The total consumption of meat can only be exactly determined for two colonies, New South Wales and Victoria, but as about 73 per cent. of the whole population are located in these colonies, it will be obvious that inexactness in regard to the other colonies will not very greatly affect computations based on the known demand of the principal members of the group. By consumption is meant the number of stock slaughtered for local use only; meat for export purposes has therefore not been taken into account.

The consumption of stock in Victoria was,—

Year.	Cattle.	Sheep.
1882………	295,942	1,940,750
1883………	245,328	1,762.121
1884………	234,420	1,839,601
1885………	218,378	1,751,635
1886………	210,209	2,145,823
1887………	215,895	2,217,178

his gives the average yearly consumption per inhabitant for the ive years as 2·0 sheep, 0·25 cattle; but as the demand for beef appears to be declining, the average has been taken at ·23 cattle per head. The stock slaughtered for food in New South Wales during the past two years numbered—

	Cattle.	Sheep.
1887.........	249,289	1,899,230
1888.........	243,886	1,747,955

Average consumption in Australia.

These figures give an average of 1·75 sheep and ·24 cattle per inhabitant. The stock slaughtered on stations is, however, not allowed for; on the other hand the sheep and cattle killed at meat preserving works have been included, so that the figures stated are very near the truth. In Queensland the consumption is not accurately known, but from such information as there is to hand, it would appear that the annual requirements per inhabitant are extremely high, being probably not less than 2·0 sheep, 0·4 cattle. The total consumption in the three colonies, estimating on the population at the close of 1887, would be,—

Colony.	Population.		Sheep.		Cattle.
New South Wales ...	1,042,919	× 1·75	1,825,108	× ·24	250,300
Victoria	1,036,119	× 2· 0	2,072,238	× ·23	238,307
Queensland............	366,940	× 2· 0	733,880	× ·40	146,776
Total............	2,445,978		4,631,226		635,383

The average consumption for these colonies is therefore, approximately, 1·9 sheep and 0·26 cattle. These figures may be safely adopted as the consumption per head of Australia, for whether South Australia or Western Australia consume more or less than above given, the average of Australia will not be sensibly affected.

Annual cast of stock.

The cast, or quantity of stock annually available for market, can only be determined by the experience of experts. The most diverse opinions prevail in regard to this matter, especially amongst those whose experience is confined to one class of country. The best authorities agree very closely, however, in fixing the annual cast of cattle at $11\frac{1}{6}$, and that of sheep at 15, per cent.

Cast of stock compared with consumption.

The total population of Australia at the middle of 1888 was 2,858,000, and the consumption at the rate of ·26 cattle and 1·9 sheep per head would be,—

2,858,000 × ·26 = 743,080 cattle,
2,858,000 × 1·9 = 5,430,200 sheep,

while the cast of stock for 1888 was,—

Cattle ...	7,916,520 @ 11⅛ % ...	884,000
Sheep ...	79,679,235 @ 15 % ...	11,951,885

Deducting the consumption from the cast would leave a surplus of

	Supply.		Demand.		Surplus.
Cattle ...	884,000	—	743,080	=	140,920
Sheep ...	11,951,885	—	5,430,200	=	6,521,685

The question of meat supply therefore resolves itself shortly into this: How long will a yearly supply of 884,000 cattle, increasing at the rate of 1 per cent., meet the food demands of a population increasing at 4 per cent., and at present requiring 743,080 head of cattle annually? Also, how long will a supply of 11,951,885 sheep, increasing at the rate of 3·62 per cent., meet a demand for 5,430,200, increasing at the rate of 4 per cent.? As regards the supply of cattle, 884,000, increasing at 1 per cent., will be overtaken by 743,080, increasing at 4 per cent., in six years.

Demand will overtake supply.

If, however, a greater rate of increase than 1 per cent. obtain, say, 1¼, 1½, 2, or 2½, the times will be as follows :—

At 1¼ %	supply	will be overtaken in	6·5	years.
At 1½ %	do	do	7·1	do.
At 2 %	do	do	9·0	do.
At 2½ %	do	do	12·0	do.

Whether the higher or the lower rate be adopted makes little practical difference, and it would seem from the above computations, that if the present rate of consumption continue the demand for beef will overtake the supply in six to twelve years from the close of the year 1888.

Surplus cattle in Queensland.

The present annual surplus of cattle is produced entirely by Queensland; the other Colonies show a considerable deficiency. Thus, in Victoria during the year 1887, the cast fell short of the consumption by about 72,000, in New South Wales by 37,000, and in South Australia the deficiency was about 31,000 head, making a total deficiency in these Colonies of 140,000; Queensland, however, could have been in a position to export 300,000 head, so that the net annual surplus for Australia for that year was 160,000 cattle, while for 1888 this surplus was probably not greater than 141,000.

Large surplus of mutton.

The case in regard to sheep is very different. The present demand for 5,430,200 sheep does not equal half the available supply, and although, at the present time population tends to increase at a slightly greater ratio than the flocks of the country, it is impossible to believe that this rapid rate will long continue, so that the supply of sheep is never likely to be seriously trenched upon, and a very large surplus will exist for supplying markets outside Australia.

From the considerations above given it will be plain that the supply of beef is practically limited, while that of mutton is inexhaustible. There is, however, a marked tendency to reduce the consumption of beef, especially in Victoria, so that the time when supply and demand will be level may be a little retarded, but the reduction in consumption would require to be very considerable to appreciably affect the result indicated.

Unnecessary losses of stock

The conclusions just arrived at are based on the assumption that the losses of stock experienced in past years will find their counterpart in the future, that instead of an increase of 17·5 per cent. on sheep there will be but 3·62, and instead of 15·5 per cent. increase in cattle there will be only 1 per cent. Yet there is nothing in the nature of things which makes the enormous waste of animal life a necessary concomitant of the pastoral progress of Australia. Although it is impossible that these Colonies could under any circumstances find sustenance, for a continued increase at the maximum rates given above, there is still an ample margin between the rates of increase which are possible and those that are now obtained, in saving a portion of which capital might be profitably invested.

Water and food conservation.

If it were possible by water and food conservation, to save one fourth the natural increase of the stock of these Colonies, the lavish use of meat as an article of diet which now obtains could be continued, while any increase above that named would be available for export. Unless, however, steps are taken to mitigate the effect of the periodic droughts which afflict the country and save part of the astonishing and unnecessary waste of animal life, the demand for beef will within the period named overtake the supply. But even in such event it will always be possible to again overtake the demand, if measures be devised to minimize the disastrous effects with which a failure of the season is now attended.

Surplus of meat in New South Wales.

New South Wales is perhaps more favourably situated than the other continental colonies in respect to meat supply derived from its own territory. It has, relatively, more stock than any other colony, and the yearly cast is larger than the average of all Australia. Against this its population increases much more rapidly, and although the meat supply increases at the rate of 3·5 per cent. in each year, and shows a present surplus of 153,000,000 lb., or more than one-third of the entire surplus of Australia, its population increases at the rate of 4·5 per cent., thus somewhat counterbalancing the gain from a larger cast and more extensive flocks. The total consumption of meat in the Colony at the end of 1888 amounted to 267,000,000 lb., while the total cast or return from cattle and sheep amounted to nearly 420,000,000 lb. The former, increasing at 4·5 per cent., will overtake the latter, at 3·5 per cent. per annum, in forty-seven years. It would, therefore, appear that the danger of the meat supply failing has no practical interest, as before the forty-seven years have expired the condition of the Colony will probably be very different from what it is to-day. This computation is based on the assumption that the deficiency in the supply of beef is made good by the use of mutton, which must

Consumption of meat, and cast.

necessarily happen now that the cast of cattle is actually less than required for the slaughter yard. It has already been pointed out, in dealing with the whole question of meat supply for Australia, that even if only one fourth of the natural increase of stock were saved from the fatal effects of droughts, these Colonies could permanently enter the lists as exporters of meat. What is true of Australia is also true of New South Wales, and it is astonishing that so large a waste of animal life should be looked upon as inevitable.

SLAUGHTERING.

Slaughtering for food.

Slaughtering for food is permitted only in places licensed for the purpose, but such establishments are very numerous. In the metropolitan district there are 14, and in the country districts 1,396 slaughter-yards, employing respectively 270 and 3,173 men, in all 1,410 establishments, and 3,443 men. The quantity of meat consumed in the metropolitan district during the year is about 235 lb. per head, comprising 77 lb. mutton and 158 lb. beef, to produce which 616,966 sheep and lambs and 74,163 head of cattle were slaughtered in 1888. In the rest of the Colony the demand for beef also greatly predominates, the yearly quantity being 72 lb. mutton and 176 lb. beef, making a total of 248 lb. per head, a quantity somewhat larger than obtains in Sydney and its suburbs. The stock slaughtered in the country districts during 1888 was 1,130,989 sheep and 169,723 cattle. In addition to the stock mentioned above, there were slaughtered 135,890 pigs—71,174 in Sydney, and 64,716 in the country. The following table shows the quantity of stock of each kind killed for food in 1888:—

Stock.	Number slaughtered in 1888.		
	Metropolitan.	Country.	Total.
Sheep	574,655	1,096,384	1,671,039
Lambs	42,311	34,605	76,916
Bullocks	42,311	122,666	164,977
Cows	19,846	40,724	60,570
Calves	12,006	6,333	18,339
Pigs	71,174	64,716	135,890

value of stock varies a good deal during the year, but all stock sold at Homebush for the Sydney market, the ge value during 1888, was—bullocks, £6 9s. 8d.; cows, 4d.; wethers, 8s. 5d.; ewes, 6s. 10¼d.; lambs, 7s. 0½d.

Price of fat stock.

DAIRY FARMING.

iry farming has made very rapid progress of late years, ally in the south coast districts, and promises to develop into y important industry. The number of dairy cows during the part of the year 1889 may be estimated as 248,894, thus buted :

Dairy farming a promising industry.

Number of Dairy Cows.

politan District	6,518	Macquarie, East	1,900
y	975	Macquarie, West	1,945
e	7,504	Maitland, East	1,325
ald	1,091	Maitland, West	141
	3,222	Molong	1,075
wa	1,044	Monaro	6,485
e	1,823	Morpeth	2,084
wood	3,148	Mudgee	2,919
en	20,639	Murray	1,559
ar	2,849	Murrumbidgee	5,009
ce	1,679	Namoi	1,488
l Cumberland	2,920	Nepean	2,882
m	4,504	Newcastle	382
	31,038	New England	3,739
s	2,450	Northumberland	1,256
nnes	2,478	Orange	2,821
ster	3,561	Parramatta	199
urn	220	Patrick's Plains	4,092
n	2,311	Queanbeyan	2,922
ll	2,684	Richmond	10,856
gai	2,753	Shoalhaven	15,271
dah	1,555	Sturt	431
r	1,909	Tamworth	3,117
y	2,151	Tenterfield	2,209
gs and Manning	5,973	Tumut	3,426
sbury	2,068	Wellington	1,670
	3,896	Wentworth	264
r	4,152	Wilcannia	193
r, Upper	3,274	Wollombi	1,640
rra	9,090	Yass Plains	2,492
ll	1,603	Young	1,432
	17,523		
y	3,065		248,894

Butter and cheese made.

Factory butter.

Hands employed.

Constant attention to the peculiarities of the climate, and the wants of the colonists, as well as the judicious crossing of strains, have developed a breed of cows peculiar to Australia. This is especially the case in the coast districts immediately south of Sydney, though all well-known breeds of milkers are found in New South Wales. The milk yielded by the dairy cows of the Colony amounts to 130,000,000 gallons, of which the quantity consumed in making butter and cheese during the past year may be set down as 64,000,000 gallons, and the weight of the butter made 15,555,440 lb., and of cheese, 5,687,702 lb. The yield of milk averages daily about 2 gallons per head milked. The quantity of milk required to make a given weight of butter varies considerably according to whether the milk is treated by a separator or in the old fashion. A great proportion of the butter now made is what is usually termed factory or separator-made, and the average quantity of milk used per lb. of butter produced is 2·6 gallons. For ordinary hand-made butter the quantity required is from 3 to 4 gallons, thus showing a saving of about 33 per cent. by the former method, in addition to the extra value of the butter, the price during 1888 being about 3d. per lb. higher in the Sydney markets for the factory-made than for the ordinary kind. No statistics respecting the manufacture of butter and cheese were collected prior to 1887, when the quantity made was 16,106,000 lb. and 5,780,000 lb. respectively. The number of hands employed at dairy farming was approximately 10,000 of these 1,124 were employed in the various factories. The factories numbered 179, of which 63 employed steam and 116 hand or other power. The plant developed about 380 horse-power, and was valued at £44,558, and the buildings and land £106,575, making the total capital invested, exclusive of stock, £151,133. Notwithstanding the extent of this industry, and the resources of the Colony, butter and cheese are still largely imported, the quantity imported and exported varying greatly with the seasons.

ollowing table shows the trade in these commodities during ast ten years :—

Butter.		Cheese.	
Imported.	Exported.	Imported.	Exported.
lb.	lb.	lb.	lb.
105,056	1,098,522	246,139	141,138
228,144	1,227,059	115,678	173,829
660,128	762,397	171,544	145,833
1,654,016	437,856	331,944	163,378
1,813,504	778,635	161,753	259,742
2,791,936	621,264	725,177	247,337
3,624,992	521,473	769,148	123,585
3,129,392	286,944	1,229,334	85,815
1,034,544	1,041,152	318,099	247,826
2,258,704	764,960	691,148	300,375

former table shows the number of dairy cows in each oral district. The following are the districts in which the est quantities of butter and cheese are made :—

Butter and cheese making districts.

District.	Butter made.	Cheese made.
	lb.	lb.
le	320,126	60,564
den	3,171,895	17,146
n	3,338,736	4,934,787
arra	501,828	960
na	1,220,733	....
aro	90,503	255,292
mond	1,056,542	65,922
lhaven	1,891,267	58,708
r districts	3,963,810	294,323
	15,555,440	5,687,702

HORSES.

Horse-breeding.

ew South Wales is eminently fitted for the breeding of most riptions of horses and attention has long been directed to this stry. At an early period of its history the Colony was enriched he importation of some excellent thoroughbred Arabians from a; and the high name which was acquired by the horses of

Excellence of native grasses.

Australia was largely due to this cause. The abundance of g pasture everywhere obtainable also contributed to this result. T native kangaroo-grass, especially when in seed, is full of sacchari matter, and young stock thrive excellently upon it. This abundar of natural provender allowed a large increase in the stock of t settlers, which would have been a great advantage, had it not b that the general cheapness of horses led to a neglect of the canons breeding. The discovery of gold speedily cured one evil. Hor became very high priced. Under ordinary conditions this circu stance would have been favourable to the breed of horses, a such was the case in Victoria. In this Colony it was far oth wise. The best of the stock of New South Wales, including large proportion of the most valuable breeding mares, were tak by Victoria, with the result that for twenty years after the go rush the horses of the Colony greatly deteriorated. One cl of stock only escaped. The thoroughbred racer was probab improved both by the importation of fresh stock from Englan and by the judicious selection of mares. The period of deterior tion ended about the year 1870, since which year there has be a perceptible improvement in all classes of horses. The numb of horses in New South Wales shows little increase for the la sixteen years, as may be seen from the table below.

Partia deterioration of stock.

Year.	Number of horses.	Year.	Number of horses
1873	334,462	1881	398,577
1874	346,691	1882	328,026
1875	357,696	1883	326,964
1876	366,703	1884	337,172
1877	328,150	1885	344,697
1878	336,468	1886	361,663
1879	360,038	1887	390,609
1880	395,984	1888	411,368

Small annual increase of horses.

The annual increase in the number of horses has been not mo than 1·1 per cent. during the whole period covered by the abo table, while the increase of population has been at the rate 4·26 per cent.

Classification of horses.

or purposes of classification the horses of the Colony have been led into draught, light-harness, and saddle-horses, the numbers ach particular kind being as follows :—

Class.	Thoroughbred.	Ordinary.	Total.
ught	19,141	116,197	135,338
t-harness	13,495	92,516	106,011
dle	23,252	146,767	170,019
Total	55,888	355,480	411,368

Saddle and harness horses.

Endurance of colonial horses.

The Colony is specially adapted for the breeding of saddle and t-harness horses, and it is doubtful whether these particular eds of Australian horses are anywhere surpassed. The bush se is hardy and swift, and capable of making very long and id journeys, when fed only on the ordinary herbage of the ntry ; and in times of drought, when the grass and water have ome scanty, these animals often perform astonishing feats of urance. Generally speaking, the breed of horses is improving, ing to the introduction of superior stud horses and the breeding m good mares. Where there has been a deterioration in the ck, this has been due to breeding from weedy mares for racing poses and from the effect of the drought.

The approximate number of animals fit for market during present year will be :—

Draught-horses	20,439
Saddle ,,	29,473
Light-harness horses	20,853
Total	70,765

India and China markets.

Of these it is estimated that nearly 15,446 are suitable for Indian and China markets. The total number leaving the ony for markets outside Australia during 1888 was only 2,200. hough the demand for horses in India is considerable and Aus- lia is a natural market from which supplies may be derived re is no one employed by the Indian Government to make self acquainted with the resources of the various colonies, or to nish information to intending shippers. The speculation of sending horses to India is one open to many risks, as, apart f the dangers of the voyage, there is always an uncertainty as to stock being accepted. Owing, therefore, to the limited dem it has not been found advantageous to breed horses for any local requirements, and the attention of pastoralists is al exclusively devoted to sheep and cattle breeding, the returns f which are more regular and profitable.

SWINE.

The breeding of swine has also been very much neglected in N South Wales, so that in 1888 the number of stock was much than in 1861. Considering the importance which the industry attained in other countries, it is a matter of surprise that m attention has not been paid to it in this Colony, where the conditi of farming in many parts, more especially in the coast distri offer great facilities for the raising of this class of stock. T estimated value of swine in the Colony at the close of 1888 w £[illegible], and the estimated return therefrom for the year w about £[illegible]. The following table shows the number of p in New South Wales for each year since 1861 :—

Year.	Number of swine.	Year.	Number of swin
1861	146,091	1875	199,950
1862	125,541	1876	173,604
1863	125,898	1877	191,677
1864	164,134	1878	220,320
1865	146,901	1879	256,026
1866	137,913	1880	308,205
1867	173,168	1881	213,916
1868	176,901	1882	154,815
1869	173,924	1883	189,050
1870	243,066	1884	211,656
1871	213,193	1885	208,697
1872	218,904	1886	209,576
1873	240,680	1887	264,111
1874	219,958	1888	248,583

number of swine slaughtered during 1888 was 135,890, of 71,174 were killed at the Metropolitan abattoirs. The t of pork obtained was about 13,600,000 lb., of which ,900 lb. were made into bacon and ham; the principal seat bacon-curing industry being the South Coast district.

PASTORAL PROPERTY.

Value of pastoral property.

storal property and stock form the largest factor in the h, not only of New South Wales, but also of all the other pal colonies of Australasia, and the return derived therefrom largest source of the income of its inhabitants. The total l value of pastoral property, including land, improvements, lant, as well as stock, was estimated at the beginning of at £373,000,000, and of this large sum £161,500,000, or r cent., belonged to New South Wales.

Total Live Stock in Australasia.

number of stock of all kinds in each colony at the close year 1888, cannot be exactly determined, as no census was in New Zealand, but the approximate numbers were as s :—

Colony.	Sheep.	Cattle.	Horses.	Swine.
	No.	No.	No.	No.
outh Wales	46,503,469	1,622,907	411,368	248,583
a	10,805,682	1,341,069	320,181	242,296
land	13,444,005	4,654,932	324,326	68,994
Australia	7,150,000	430,000	170,000	170,000
rn Australia	2,112,392	95,822	41,390	25,083
nia	1,430,065	142,019	29,238	43,227
ealand	15,042,198	962,200	204,700	338,500
Total	96,487,811	9,248,949	1,501,203	1,136,683

Relative importance of each colony.

New South Wales, therefore, ranked first as regards the number of sheep—46,503,469 out of a total of 96,487,811, or 48·20 per cent. being depastured within its limits. In regard to cattle, this Colony stood next to Queensland, having 1,622,907 head of cattle out of a total of 9,248,949, or 17·54 per cent. of the whole of the cattle of Australia. As a horse-breeding country New South Wales came first, with 411,368, or 27·40 per cent. of the total horses of the colonies, Victoria coming second with 320,181 head. New Zealand has a larger number of swine than any other colony—its total being 338,500, or 29·78 per cent. New South Wales ranked second with 248,583, or 21·88 per cent.

Stock runs.

The number of sheep and cattle runs in the Colony during the year 1888 was 38,932, of which 32,630 were enclosed, and 6,302 were open or unenclosed; 20,311 of the enclosed runs were properly subdivided into paddocks, and 12,319 were only partially subdivided. The area comprised in these holdings was 166,000,000 acres, about 26,000,000 acres being freehold, and 140,000,000 acres leased from the State. The improvements effected on pastoral estates for fencing and for watering stock have been valued by the Chief Inspector of Stock at £64,344,000. Of this sum fencing absorbs £56,996,000, representing 1,310,420 miles at an average rate of £43 10s. per mile. The dams for watering stock number 23,330, which, at an average value of £87 10s., give a total value of £2,041,000. There were 24,741 excavated tanks, worth on an average £189 5s., or, in all, £4,682,830, while the number of wells sunk or bored number 3,131, the average value of each well being £199 5s., and the total of all wells being £624,000.

Dams and fencing.

Facilities for watering stock.

For the purpose of watering stock along routes reserved for travelling, tanks, wells, and reservoirs have been constructed by the Roads Department, and artesian wells by the Mines Department. There are 110 excavated tanks, 8 impounding reservoirs, and 28 wells of the ordinary kind. The standard depth of a tank is 18 feet, the capacity varying from 2,000,000 to 3,500,000 gallons, Storage of water on stock routes.

ve of the water stored above the surface of the ground by of embankments formed of the excavated materials, includ- s quantity the average capacity of tanks is about 5,500,000 each, with a total storage of over 600,000,000 gallons. In every case appliances for lifting and economically distribut- water have been provided to the tanks. There have been 51 steam pumps, 48 pumps worked by horse-power, and 1 by r. The water is lifted from the tank into a wrought-iron uting cistern of a capacity of 20,000 gallons, whence it tes into a steel trough about 100 yards in length, and from e stock drink. Similar appliances are found in connection he wells, but the water is raised in buckets by a horse whim t by steam power. The wells vary greatly in depth accord- the formation, the deepest being 400 feet, and the shallowest 70 feet.

The World's flocks.

latest figures which have come to hand respecting the flocks rds of the principal countries, refer to various years from to 1886, and are given below. The important part which colonies are destined to play in the wool markets of the will be better understood when the character of the wool ed in Australia is made an item of comparison, as well as tual number of sheep depastured.

	Cattle.	Horses.	Sheep.	Swine.
....	97,200,000	33,300,000	187,000,000	44,700,000
....	70,400,000	4,200,000	37,000,000	500,000
....	4,000,000	700,000	29,000,000	300,000
a, North......	55,000,000	14,900,000	47,000,000	51,600,000
a, South......	57,700,000	6,000,000	101,000,000	1,400,000
lasia............	9,300,000	1,500,000	96,500,000	1,100,000
Total	293,600,000	60,600,000	497,500,000	99,600,000

NOXIOUS ANIMALS.

No large Carnivora.

It has already been pointed out that one cause of the rapid increase of stock of all kinds in the Colony has been the absence of any large species of carnivora. The native dog or dingo is the largest of the indigenous carnivora; but in New South Wales animals which consume the grass required by the flocks and herds of settlers are equally deemed noxious with those that attack the stock itself. The chief pests of the pastoralists are native dogs and marsupials, hares and rabbits, which latter have been acclimatized, and are now the greatest enemies the Colony has to face. The number of rabbits is beyond computation, although a notion of the extent of the evil may be gathered from the fact that over 100,000,000 acres have been more or less infested, and that 25,280,000 rabbits were destroyed during 1887, and their skins paid for by the Government, in spite of which the numbers of the pest increased considerably in that year.

During the severe drought of 1888 the rabbits decreased enormously, but with the return of good seasons their numbers will become as great as formerly. The destruction of pasture by these pests was so great that the Government felt compelled to intervene in order to check their ravages. Accordingly, in 1883 the "Rabbit Nuisance Act" was passed, under which the authorities were empowered to expend certain sums from the general revenue, to be recouped by a special assessment upon stock-owners, at the rate of ½d. per head of large stock and ¼d. per sheep—holdings with less than 200 horses or cattle or 1,000 sheep being exempted. From the date of the passing of the Act mentioned to the 31st May, 1889, the amount raised by assessment was £245,848, while the expenditure was £794,865, so that the run-holders of the infested country are still liable for £549,017 expended out of the general revenue over and above the amount of assessment received. Large as are the sums mentioned above, they represent only part of the expenditure, as it is estimated that about £200,000 was paid by pastoralists, in addition to the assessment, for the destruction of the pest on their own estates. The total cost of rabbit destruction to the Colony during these six years was therefore not less than one million sterling. The following shows the yearly expenditure on account of rabbit destruction, with the amount derived from assessment and paid out of general revenue:—

Year.	Assessment.	General Revenue.	Total.
	£	£	£
1883.....................	490	......	490
1884.....................	69,406	......	69,406
1885.....................	46,926	88,128	135,054
1886.....................	40,200	127,434	167,634
1887.....................	47,518	161,228	208,746
1888.....................	41,308	109,464	150,772
1889 (31 May)	......	62,763	62,763
Total	£245,848	£549,017	£794,865

The expenditure from the rabbit fund was chiefly in subsidizing owners of infested runs for the cost of rabbit extermination, and it would appear that in many cases the amount of subsidy paid greatly exceeded the rent of the holdings. A portion of the fund was devoted to the erection of wire net fencing. Two lengths of fencing have been constructed—viz., from Narromine, on the Macquarie River, to Bourke, on the Darling River, a distance of 207 miles, thence to Barringun, a further length of 84 miles, at an average cost of £82 per mile. Another fence has been constructed along the South Australian border, from the Murray northwards 200 miles; this line will be extended a further distance of 146 miles to the north-west corner of the Colony. A fence of similar character is being constructed by the Queensland Government along the southern boundary of their Colony—which is also the northern boundary of New South Wales—from a point not far distant from the north-west corner of New South Wales, eastward 260 miles. The erection of a fence 340 miles long, from Albury to Trangie, on the Narromine to Bourke line, has been sanctioned, and will shortly be proceeded with. These fences will probably stop the eastward migration of the rabbits, but it is generally admitted that not until similar fences are constructed, joining the main lines above described, and around the infested runs, will the extermination of the rabbit plague be practicable.

Marsupials.

Hares are not so plentiful as rabbits, and are said to number not more than 2,000,000. There are supposed to be about 1,400,000 kangaroos still in the Colony, and 3,200,000 wallabies, the numbers of both classes of marsupials having greatly diminished of late years, a circumstance probably as much due to the value of their skins as to the subsidy paid by the State, and by stock-owners, for their destruction. There are said to be over 30,000 dingoes infesting various parts of the Colony; but this estimate, as well as the others just given, must be taken as the merest approximation.

Extirpation of noxious animals.

For the destruction of noxious animals other than rabbits the amount of assessment paid by stock-owners was £24,938, and the expenditure £52,121, the difference between these sums being paid by the general government, or from the savings of previous years. The number of kangaroos destroyed during the year was 657,320; of wallabies, 653,590; kangaroo rats, 31,030; paddamellons, 14,181; wild pigs, 9,938; hares, 167,110; native dogs, 9,824; eagle-hawks, 1,140. The loss of stock from native dogs is reported to have been 65,488 sheep, valued at £17,410; while the loss from tame dogs is returned at 52,332 sheep, valued at £16,638.

Rewards paid.

The reward paid for scalps of noxious animals differs greatly, according to the locality, and is determined by the various Boards. The prices paid were as follows:—For kangaroos, from 1d. to 1s.; wallaroo, 4d. to 1s.; wallaby, from 1d. to 1s.; paddamellon, from 2d. to 1s. 6d.; hares, from 2d. to 1s. 6d.; kangaroo rats, 2d. to 6d.; native dogs, from 10s. to 80s.; pups, 2s. 6d. to 10s.; opossum, 1d.; wombats, 2s. 6d.; wild pigs, 1s.; bilbees, 2s. 6d. to 5s.; eagle-hawks, 2s. 6d. to 10s.; emus, 3d. to 2s.

PART XII.

Food Supply and Cost of Living.

THE soil of New South Wales is capable of producing, and produces most of the things necessary for the sustenance of human life, though the production of some of these necessaries has been almost entirely neglected, while others are obtained in quantities insufficient for the wants of the community. Considering the comparatively high rate of wages which prevails, food of all kinds is fairly cheap; and articles of diet, which in other countries are almost within the category of luxuries, are in New South Wales largely consumed even by the poorest classes.

The cost of providing food and beverages, other than intoxicants, consumed in the Colony during 1888 was £15,750,000. This sum represents the price to the consumer, and covers all charges, except that of cooking and preparing the food for the table. The average expenditure per head of population was therefore £14 16s., equal to 9·7d. per day, or 12·6d., including liquors. Compared with the cost of food supply in other countries this sum will not appear considerable, especially when allowance is made for the profusion with which flesh meat is

Cost of foods.

consumed and wasted in this Colony. The following figures are taken from the Dictionary of Statistics, and show the daily expenditure per head of the more important European countries and of the United States.

Daily expenditure on food, including liquors.

Country.	Pence per Head.	Country.	Pence per Head.
United Kingdom	9·0	Spain	4·6
France	7·0	Belgium and Holland	6·7
Germany	6·5	Scandinavia	6·0
Russia	4·1	United States	7·0
Austria	5·8	New South Wales	12·6
Italy	4·2		

Retail cost of oods.

The main articles of consumption in the Colony are meat and bread, the retail value of which equals about 46 per cent. of the total expenditure on food. The following is the approximate cost of the main articles which enter into daily consumption :—

Retail value of foods, &c., consumed.

	£
Bread	3,700,000
Fresh meat	3,500,000
Vegetables and fruits	2,310,000
Milk, butter, cheese, &c.	1,600,000
Other farm produce	610,000
Sugar	1,200,000
Tea, coffee, &c.	730,000
Other foods and beverages	2,100,000
	£15,750,000

Principal articles of diet.

The amount of the principal articles of diet annually required by each member of the community is estimated to be as follows :—

Flour		270 lb.
Rice		12 ,,
Meat	Beef ... 157 lb. Mutton ... 80 ,, Pork ... 12 ,,	249 ,,
Potatoes		215 ,,
Sugar		94 ,,
Butter		16 ,,
Cheese		6 ,,
Tea		131 oz.
Coffee		13 ,,

For the year 1889 the total demand of the Colony for the above classes of food will be approximately :—

Flour	149,000 tons.
Rice	6,100 ,,
Beef	78,000 ,,
Mutton	40,000 ,,
Pork and bacon	5,700 ,,
Potatoes	106,000 ,,
Sugar	43,500 ,,
Butter	7,800 ,,
Cheese	2,800 ,,
Tea	9,000,000 lb.
Coffee	929,000 ,,

Deficiency of wheat.

The production of wheat in the Colony is not yet equal to the demands of the population. In 1888 the deficiency of home production was about 3,700,000 bushels, equal to 74,000 tons of flour, or 47 per cent. of the whole requirements. The season 1888–9 was, probably, the worst on record, and the wheat harvest was a complete failure, so that the deficiency for 1889 will be unprecedently large. Based on the average of the past two years, the requirements of 1889 will be 8,000,000 bushels, of which only about one and a half million will be available from the harvest of the Colony.

Rice.

Rice is not grown in the Colony, and the quantity required is imported either directly or indirectly from China and India. The land adapted for the growth of rice in New South Wales is not very extensive in area, and is probably put to better use.

Meat supply.

In the matter of meat supply the Colony is almost independent of external assistance. The consumption of fresh meat of all kinds is extremely great, and, though possibly less than in the neighbouring colonies of Queensland and Victoria, it exceeds per head that of any other country. The requirements of the Colony for food alone amounted in 1888 to 243,886 head of cattle, 1,747,955 head of sheep ; and, though the supply of cattle sufficient to meet the demand was beyond the resources of the Colony, the number of sheep available for market very largely exceeded even the number given above, and were it not for the preference of beef to mutton no stock need have been imported for slaughtering.

Consumption of sugar.

The consumption of sugar in the Colony is enormous, averaging about 94 lb. per head during each year. The fields of the Colony produced during 1888 about 18,400 tons, or 22,300 tons short of the local demand. This large quantity was imported principally from Queensland. As pointed out in the previous pages relating to agriculture, a large part of the Colony is well adapted to the growth of sugar-cane; but the low price which sugar has brought for several years has not made it sufficiently profitable, and its cultivation has been to some extent neglected. The considerable rise in the price of this commodity during 1889 may lead to an extension of cultivation, as the area under cane could be almost doubled, before the requirements of the Colony itself would be exceeded.

Potatoes.

The amount of potatoes imported during 1888 was 52,239 tons, while the quantity available from the fields of the Colony was only 61,455 tons. The imports amount, therefore, to 46 per cent. of the total consumption, a result due not to the inability of the farmers to grow this crop, but to the low prices prevailing for some years in the local markets, which have discouraged the further extension of the cultivation of the potato.

Consumption of beverages.

The quantity of the beverages, tea and coffee, consumed is remarkably large, while the consumption of wine, beer, and spirits, which are in this Colony mere luxuries, is perhaps more considerable than would be expected amongst a people so largely addicted to tea drinking. The quantities consumed annually per head average as follows:—

Tea	8 lb. 3 oz.
Coffee	13 ,,
Wine	0·72 gallons.
Beer	12·85 ,,
Spirits	1·20 ,,

Tea and coffee.

Tea is not grown in the Colony, and though the soil and climate of a part of New South Wales are adapted to its cultivation, no systematic attempt has been made to grow this plant. The coffee

, especially the Liberian variety, thrives in the north coast ct, but it has not yet been cultivated for commercial purposes.

Butter and cheese.

e consumption of butter and cheese varies greatly, being tly affected by the character of the season which prevails. uantity of butter imported during 1888 was 20,167 cwt., he amount of home produce 138,888 cwt., making a total of 55 cwt. New Zealand supplied 11,170 cwt., Victoria 3,857 and South Australia 4,860 cwt. of the butter imported. se is not so largely consumed as might be expected from the ral occupations of the people of the Colony and the largeness flocks. The amount of cheese made in the Colony during was about 50,783 cwt., while the quantity imported reached cwt. New Zealand and South Australia supply the larger of the cheese imported into New South Wales, the former ry sending 3,880 cwt., and the latter 918 cwt. during the named.

Food consumption in Australasia

e average quantity of the principal articles of common diet ven below for the various Colonies of Australasia. It will n that the consumption of wheat varies from 305 lb. in ria to 443 lb. in New Zealand, the average consumption 374 lb. per head. Rice, which is almost entirely imported, greatly in the quantity used, only 4·5 lb. being the contion of South Australia, as against 24 lb. in Queensland. se of tea is universal in Australia, the consumption being t in New South Wales and Queensland—with 131 oz. and oz. respectively. The consumption of this beverage in and amounts to 76 oz. per head, in the United States to ., while on the continent of Europe the quantity does not d 1 oz. Sugar also enters largely into consumption, the ge being 100 lb. per head in Victoria and 94 lbs. in New h Wales. Coffee is not a favourite beverage in Australasia, onsumption being scarcely more than one-tenth that of tea. used most largely in South Australia, where the annual tity amounts to 21 oz.

Consumption of Foods, &c., in Australasia.

Article.	New South Wales.	Victoria.	South Australia.	Queensland.	Tasmania.	New Zealand.
Wheat lb.	405	305	..	366	371	443
Rice lb.	12·5	15	4·5	24	9	8·5
Potatoes lb.	215	282	195	250	389	412
Sugar lb.	94	100	87	59	86	78
Tea lb.	8·2	7·2	6·4	8·7	6·4	6·7
Coffee oz.	13	17	21	14	8	10
Cheese lb.	5·7	...	...	...	...	4·5
Butter lb.	16	...	...	...	...	16
Salt lb.	38	...	...	43	20	29
Meat—Beef lb.	157	155	...	280	...	...
Mutton lb.	80	98	...	90	..	...
Pork, &c. lb.	12	12	...	...	...	...
Tobacco and Cigars lb.	3·4	2·7	2·1	3·5	1·8	2·0

Consumption of tobacco.

The consumption of tobacco is shown as well as that of foo The use of tobacco appears to be more prevalent in Queensla and New South Wales than in any of the other colonies, whil the least consumption is in Tasmania. Compared with othe parts of the world, the average consumption of Australia will no appear excessive. The following figures are from the Dictionar of Statistics :—

Annual Consumption of Tobacco per Inhabitant :—

	Ozs.		Ozs.
United Kingdom	23	Turkey	70
France	29	Switzerland	82
Germany	72	United States	59
Russia	24	India	30
Austria	80	Japan	39
Italy	22	Brazil	70
Spain and Portugal	32	Australia	45
Belgium	84	New South Wales	54

Quality of food indicative of prosperity.

Judged by the standard of food consumed, the population New South Wales, as well as of all the other colonies of Austra asia, must appear remarkably prosperous. Compared with the of other countries, this will most clearly appear from the followin the particulars given in which, with the exception of those ing to Australia, have been taken from Mulhall's History of s.

Consumption of foods.

Consumption of Foods.

rticles of nsumption.	Australasia.	New South Wales.	Great Britain.	France.	Germany.	United States.
	lb.	℔.	℔.	℔.	℔.	℔.
	374	405	330	455	166	305
	276	249	105	74	69	120
r	89	94	72	21	21	23
	35	38	40	30	25	39
er	16	16	26	7	12	18
toes,	279	215	315	550	1,060	150
	oz.	oz.	oz.	oz.	oz.	oz.
	120	130	73	1	1	21
e	14	13	15	52	83	115

Thermo-dynamic of foods.

king only the main articles of the foregoing list, grain, meat, r, butter, and potatoes, and reducing them to a common basis mparison, it will be found that the amount of thermo-dynamic er, capable of being generated by the food consumed is largely vour of this Colony. For purpose of comparison the figures r. Edward Smith, F.R.S., in his well-known work on Foods, been used, and the heat developed has been reduced to the valent weight lifted 1 foot in height.

Thermo-dynamic effect of Foods per day.

	Tons lifted 1 foot high.
Australia	3,179
New South Wales	3,154
Great Britain	2,695
France	1,947
Germany	2,797
United States	1,931

he substances included in this table are largely supplemented h in America and Europe by other foods, but not more largely n in these colonies, and in the table just given will probably be nd a just view of the comparative quantity and food value of articles of consumption in each of the countries mentioned. e comparison will appear much more largely in favour of

Australasia when the average amount of work which each ind vidual in the community is called upon to perform is taken in consideration. In New South Wales, and indeed in all Au tralasia, the proportion of women and children engaged in laborio occupations is far less than in Europe and America, and the hou of labour of all persons are also less, so that the amount of foo energy required is therefore less also.

Food consumed in excess of requirements.

In Mulhall's Dictionary of Statistics, under the heading "Diet," is given a measure of the aggregate amount of wo performed by persons doing physical and mental labour, and would appear that the food of an average man, when burnt in th body, should be equal to at least 3,300 foot tons of work dail while for a woman 2,200, and for a child 1,100 foot tons. In this Colony the average of all persons would be about 2,125 foo tons, whereas, from the table just given, the amount of wo which the daily food consumed by each individual in the Colon from the principal foods consumed is equivalent to, is not less tha 3,154 foot tons. The quantity of food consumed in New Sout Wales would therefore appear to be far in excess of the actu requirements of the population, and though the excess ma be looked upon as waste, it is none the less evidence of th wealth of the people whose circumstances permit them to indulg in it.

Foods imported.

It has already been pointed out in various parts of this wo that New South Wales is adapted by soil and climate for th production of all the principal things which are required for th alimentation of mankind. The following table has been prepare to show what descriptions of food are imported which might b grown or manufactured in the Colony, the countries from whic they are obtained, and the parts of New South Wales where the could be produced. Whether they could be raised commerciall is a different question, and one which it is not proposed to discu in this chapter.

daptability of New South Wales for Food Production.

Foods capable of being grown in New South Wales.

le n- ion.	Produce of	Part of the Colony where produce could be raised.
root	Tropical and sub-tropical climates generally.	Valleys of the coastal rivers north of the Hunter.
......	Central and South America.	In well-sheltered spots, valleys of the Richmond, Brunswick, and Tweed Rivers.
......	Ceylon, Arabia, West Coast of Africa, Mexico, and Brazil.	Valleys of the northern rivers and rich brush lands.
nts...	Asia Minor, Syria, Greece.	Wherever grapes are successfully cultivated in the Colony, and generally throughout the coastal region and the valleys of the Murray and Murrumbidgee Rivers.
ns.....	Asia Minor, Syria, Greece.	
....	Europe, North America, Victoria, Tasmania.	In the uplands of the Monaro, Yass, and Tumut districts, the south coast, and New England.
ard ...	Tropical and sub-tropical climates generally.	Valleys of the coastal rivers north of the Hunter.
s	South of Europe and North Africa.	In almost every part of the Colony, except the cold uplands of the central division.
....	Asia, Madagascar, South of Europe, Southern States of America, &c.	In marshy lands, lower valleys of the coastal rivers.
s	Ceylon, East Indies, Southern Asia.	In selected spots, valleys of the northern coastal rivers.
....	Southern and Eastern Asia.	Valleys of the northern rivers.
lla	Mexico, Brazil, Mauritius.	In well-sheltered spots, valleys of the northern rivers.

COST OF LIVING.

Gross income.

lsewhere in this volume, under the chapter on Finance and lic Wealth, the income of persons living or holding property he Colony is stated to be about £54,000,000. How the me is used cannot be more than approximately ascertained, the following statement may be taken as fairly exact as far as tends. It would appear that £48,700,000 were absorbed in ting the actual expenses of living, leaving a balance of 300,000, which represents the annual savings of the people the income drawn from the Colony by persons whose property is in New South Wales and whose residences are abroad. Grou under comprehensive heads, the expenditure may be set down as

Distribution of Expenditure of the Population of New Sout Wales.

Food and beverages	£15,750,0
Fermented and spirituous liquors	4,680,0
Tobacco	780,0
Clothing and drapery	7,470,0
Furniture	900,0
Rent or value of buildings used as dwellings	6,000,0
Locomotion	1,640,0
Fuel and light	1,780,0
Personal attendance and service	1,990,0
Medical attendance, medicine, and nursing	920,0
Religion, charities, education (not including State expenditure)	860,0
Art and amusement	1,050,0
Books, newspapers, &c.	600,0
State services, postage, telegrams, succession dues	730,0
Household expenses not included elsewhere	1,550,0
Miscellaneous expenses	2,000,0
	£48,700,0

Daily expenditure.

The yearly expenditure, as shown in the foregoing statem amounts to £45 15s. 3d., or at the rate of 2s. 6·1d. per da According to Mulhall, the expenditure per head in the leadi countries of Europe and in the United States is :—

Daily Expenditure per head in various countries.

Countries.	Expenditure pe head.
	pence.
United Kingdom	20·8
France	15·4
Germany	12·8
Russia	6·6
Austria	10·1
Italy	7·6
Spain	8·4
Belgium and Holland	13·8
Scandinavia	11·1
United States	15·6
New South Wales	30·1

Cost of living and earnings.

The table just given affords but a partial view of the quest of the cost of living; for if the total earnings of the count above enumerated be considered as an element of comparison will be found that few countries approach New South Wales the small portion of their income absorbed in providing food

Cost of food compared with earnings.

ople. The following table, given on the same authority as eding, shows that, while the actual cost of food and drink ls. in this colony, as against £13 9s. in Great Britain and in Russia, the earnings required to pay for this food are ger proportionately than in the United States or Great , the countries which show most favourably in the table. mber of working days in the year is assumed to be 300, g for thirteen days' sickness and fifty-two Sundays :—

Comparative Cost of Food and Beverage.

Country.	Average cost per inhabitant yearly.			Ratio of Food to Earnings per cent.	Days of Work equal to Food.
	£	s.	d.		
Kingdom	13	9	0	37·8	113
	10	8	0	40·6	121
y	9	5	0	51·8	155
	6	3	0	60·2	180
	8	8	0	53·1	159
	6	6	0	53·3	162
	7	11	0	56·5	164
and Holland	10	14	0	45·5	143
k	11	8	0	50·6	152
avia	8	6	0	50·0	150
States	10	9	0	37·0	111
uth Wales	19	4	0	37·8	113

CONSUMPTION OF INTOXICANTS.

consumption of wines, spirits, and fermented liquors has ecreasing for some years, as will be seen from the following ent, showing the average consumption of spirit per inhabitant the past six years.

	Gallons.		Gallons.
3	3·52	1886	3·23
4	3·53	1887	2·97
5	3·37	1888	2·88

Quantity of proof alcohol.

e figures represent the amount of alcohol contained in the consumed ; the quantities are given in proof spirit as being ure more easily understood, if less scientific, than that of te alcohol.

Decrease of intoxicants consumed.

The satisfactory state of things depicted in the foregoing t is due to a combination of causes. Five of these are most nota the more stringent provisions of the Licensing Act, the incre duty and consequent increased cost of spirits, the decrease in proportion of rougher labourers to the general community, depression of trade, and, lastly, the spread of teetotal princip It were futile to attempt to determine how these causes h operated individually in decreasing the consumption of intoxica but the fact of such a decrease cannot be gainsaid, for the di evidence given above is corroborated by the decline in the num of arrests.

Sqirits consumed.

The volume of spirits consumed in the Colony during 1888 17,111 gallons of Colonial rum, and 1,147,864 gallons of impo spirits, in all 1,164,975 gallons, equal to 1·10 gallons per head quantity not more than two-thirds of the consumption during years 1877 and 1878, as will appear from the following table.

Consumption of Spirits in Proof Gallons.

Year.	Quantity Consumed.		Year.	Quantity Consumed.	
	Total.	Per Inhabitant.		Total.	Pe Inhabi
	Gallons.	Gallons.		Gallons.	Gall
1877	1,029,142	1·64	1883	1,214,990	1·
1878	1,097,205	1·66	1884	1,257,201	1·
1879	1,039,687	1·50	1885	1,219,024	1·
1880	1,011,999	1·38	1886	1,172,140	1·
1881	1,109,274	1·46	1887	1,136,863	1·
1882	1,164,115	1·46	1888	1,164,975	1·

Beer consumed.

The quantity of Colonial beer which has been consumed only be given accurately for the last two years, though app mations have been made for the years 1885 and 1886. It wi seen that the consumption has declined considerably, in spi the increase in population. The quantity of imported beer however, increased, as will be seen from the following stateme

Consumption of Beer, Porter, &c.

Year.	Colonial.	Imported.	Total.	Per Inhabitant.
	gallons.	gallons.	gallons.	gallons.
1885	11,000,000	1,839,500	12,839,500	13·79
1886	10,000,000	2,075,000	12,075,000	12·32
1887	9,720,000	2,126,000	11,846,000	11·69
1888	9,300,000	2,413,000	11,713,000	11·01

Falling off in consumption of beer.

The amount of beer drunk in 1885 was approximately 12,839,500 gallons, of which 11,000,000 gallons were the produce of the Colony, representing 85·7 per cent. of the total consumption. In 1888 the quantity had fallen to 11,713,000 gallons, and the proportion, locally made to 79·4 per cent. During the same period the consumption per head had declined from 13·79 gallons to 11·01.

Consumption of wine.

The wine drunk in the Colony is mostly the produce of its own vineyards, but it is nevertheless much less than might have been expected in a country so eminently adapted to wine-growing as New South Wales, and amounts to only about half that drunk in Victoria. The consumption of Australian and European wines for the past ten years is given below; it will be seen that there has been no increase during this period.

Consumption of Wine.

Year.	Australian.	Foreign.	Total.	Per Inhabitant.
	gallons.	gallons.	gallons.	
1879	667,214	165,705	832,919	1·20
1880	705,992	154,190	860,182	1·18
1881	579,630	172,846	752,476	0·99
1882	491,263	186,006	677,269	0·85
1883	500,308	182,613	682,921	0·82
1884	560,447	188,069	748,516	0·85
1885	414,113	193,642	607,755	0·65
1886	531,253	173,995	705,248	0·72
1887	584,179	161,033	745,212	0·73
1888	625,359	180,502	805,861	0·76

Expenditure o liquors.

The amount expended upon wines, spirits, and fermented liquors, consumed in the Colony during the year 1888, was about £4,680,000. Of this sum £2,811,000 was the cost of liquors to the retailer, of which £1,171,000 represents duty, excise, and license fees, and £1,640,000 the invoice price of the goods. The cost of working the trade and the profits of the merchants and retailers therefore came to £1,869,000. The expenditure on liquors per inhabitant amounted to £4 8s. during the year, which, though undoubtedly a large sum, amounting, as it does, to 8½ per cent. of the average income, is nevertheless proportionately smaller than the expenditure of several European countries. The following table gives the rate per inhabitant and the proportion of income devoted to liquors. The figures should, however, be taken with this qualification, that in several of the countries enumerated, liquors are consumed principally with meals in place of tea or coffee, so largely partaken of in English-speaking countries.

Yearly Amount expended on Liquors in various Countries.

Countries.	Amount per inhabitant.			Percentage of income.
	£	s.	d.	
United Kingdom	2	18	0	8·2
France	1	19	0	7·7
Germany	1	14	0	9·4
Russia	1	0	0	9·9
Austria	1	13	0	10·5
Italy	1	5	0	10·7
Spain	1	5	0	9·1
Belgium and Holland	2	0	0	8·5
Denmark	2	10	0	11·1
Scandinavia	1	6	0	7·7
United States	1	10	0	4·2
New South Wales	4	8	0	8·5
Victoria	5	5	0	......

Consumption of liquors in Australasia.

As pointed out in the part of this volume relating to crime, the consumption of intoxicants in this Colony is less than in Victoria and Queensland, and equal to the average of all Australasia.

The following table shows the consumption for all the colonies. The figures for New South Wales and Victoria refer to 1888, and for the other colonies to 1887. The largest consumption of spirits per inhabitant is in Queensland, Victoria being second. Wine is used most freely in South Australia and Victoria, and beer in the same two colonies. The average consumption of alcohol in all the colonies amounts to 2·85 gallons of proof spirit per inhabitant, ranging from 4·10 gallons in Victoria to 1·83 gallons in New Zealand. The total for Victoria shows a large increase over the consumption of previous years, and is nearly 50 per cent. larger than that of New South Wales. It may be that the occurrence of the International Exhibition in Melbourne during the year to which the figures refer has tended to raise the consumption above the normal average. The consumption of alcohol in Victoria during 1886 was 3·68 proof gallons, and in 1887, 3·77.

Consumption of Intoxicants in the Australasian Colonies.

Colony.	Spirits.		Wine.		Beer, &c.		Equivalent in Alcohol (proof) per inhabitant.
	Total.	Per inhabitant.	Total.	Per inhabitant.	Total.	Per inhabitant.	
	galls.	galls.	galls.	galls.	galls.	galls.	galls.
New South Wales	1,164,975	1·10	805,861	0·76	11,713,000	11·01	2·88
Victoria	1,257,835	1·24	1,166,959	1·14	19,202,080	19·41	4·10
Queensland	619,846	1·75	198,282	0·56	3,472,613	9·79	3·21
New Zealand	459,007	0·77	117,959	0·20	4,563,086	7·65	1·83
South Australia	143,975	0·46	496,477	1·58	4,443,746	14·11	2·77
Tasmania	87,216	0·62	26,684	0·19	1,352,785	9·67	1·93
Total and Means	3,732,854	1·03	2,812,222	0·77	44,747,310	12·33	2·85

Taking Australasia as a whole it compares very favourably with most of the European countries in the quantity of intoxicants annually consumed by each inhabitant, as the following statement shows. The figures are reduced to gallons of proof spirit from data given in Mulhall's dictionary of statistics, and would look even more favourable to Australasia were the fact of the large preponderance of males over females in these colonies made a factor in the comparison.

Consumption of Alcohol in various counties—in Proof Gallons:—

Country.	Consumption.	Country.	Consumption.
	gallons		gallons
United Kingdom	3·57	Portugal..................	3·00
France	5·10	Holland	4·00
Germany	3·08	Belgium	4·00
Russia	2·02	Denmark	5·00
Austria......	2·80	Scandinavia	4·36
Italy	3·40	United States	2·65
Spain.........................	2·85	Australasia	2·85

Strength of local wines.

It is popularly supposed that Australian wines and beers are not heavily charged with spirit as compared with the imported articles; this belief is erroneous. Several descriptions of Australian wines have a natural strength of 30 per cent. of proof spirit, while from analyses made by direction of the late Commission on Intoxicating Drink, it would appear that the strength of these wines offered for sale varies from 24 to 37 per cent. of spirit. On the same authority it is stated, that imported beers range from 13·88 to 15·42 per cent. in the case of English, and from 9·58 to 11·76 per cent. of proof spirit in Lager, beers, while the local manufacture varies according to the make from 11·21 to 15·12, the average being a little short of 13·75 per cent.

PART XIII.

Population and Vital Statistics.

THE population of New South Wales about the middle of the year 1887 was more numerous than any other Colony of the Australasian group. The first position in regard to population was assumed by Victoria in 1854, when that Colony contained within her borders a larger number of persons than New South Wales, which then included the large territory of Queensland. Year by year the gap between the Mother Colony and her vigorous offspring widened, until in 1871 the census showed that the population of New South Wales was 227,547 or over 31 per cent. less than that of Victoria. Since then the difference has gradually lessened, until, during 1887, it entirely disappeared; and although towards the end of 1888 Victoria regained her supremacy as the most populous Colony, from the estimates recently made there is reason to believe that the population of this Colony is now (September, 1889) ahead to the extent of at least 4,500. The population of Victoria during 1888 increased by 54,750, or 5·28 per cent. of the population of the previous year. This rate of increase is most unusual, being more than twice the average rate for that Colony. The International Exhibition which was opened in Melbourne on the 1st August, 1888, and remained open for six months, was

N.S.W. the most populous colony.

probably the main cause of the large increase. The aver annual rate of increase of population in this Colony since beginning of 1871 (census year) has been 4·42 per cent. compared with 2·28 in Victoria.

Arrivals and departures by sea.

Estimating by the excess of births over deaths, and the excess arrivals over departures by sea, the population of the Australasi Colonies would appear to have reached a total of 3,755,200 at t end of the year 1888. But such a means of estimating populati is admittedly defective. In New South Wales the populati estimated in this manner was found at the census of 1881 to 29,952 in excess of the actual number; while in Victoria t excess amounted to 67,437. Even in New Zealand, an insu Colony, where all arrivals and departures are by sea, the popu tion at the census of 1886 was found to be less than the numb as estimated from year to year by 7,355. This excess consis for the most part, of unrecorded departures by sea. Allowing the departure of persons whose names were not returned to Customs authorities, the estimated population of New South Wa at the end of 1888 was 1,085,740. The population of the ot Australasian Colonies has been returned as follows :—

Population of Australasia.

Victoria	1,090,869
New Zealand	607,380*
Queensland	387,463
South Australia	313,065
Tasmania	146,149
Western Australia	42,137

* Exclusive of Maoris, to the number of about 42,000.

This gives a total of 3,672,803 souls for the whole group colonies. In the case of Victoria also, allowance has been m for unrecorded departures; and had this system been adop throughout, the grand total would have been somewhat less t the above estimate.

he estimated population of the Colony at the close of each r, from 1861 to 1888, will be found hereunder.

Estimated population of the Colony.

Population of New South Wales.

Year.	Males.	Females.	Total.
1861	201,574	156,404	357,978
1862	204,199	162,522	366,721
1863	207,560	170,152	377,712
1864	213,365	177,499	390,864
1865	223,254	185,893	409,147
1866	235,116	193,697	428,813
1867	243,131	201,578	444,709
1868	254,003	209,185	463,188
1869	263,899	217,549	481,448
1870	272,543	226,116	498,659
1871	282,846	234,912	517,758
1872	292,015	243,204	535,219
1873	301,399	252,434	553,833
1874	312,843	262,100	574,943
1875	323,080	271,217	594,297
1876	333,515	280,666	614,181
1877	350,329	293,378	643,707
1878	365,625	306,263	671,888
1879	386,926	322,533	709,459
1880	405,277	336,616	741,893
1881	426,944	351,746	778,690
1882	443,314	367,519	810,833
1883	470,009	387,735	857,744
1884	495,571	408,377	903,948
1885	527,533	430,381	957,914
1886	551,343	450,623	1,001,966
1887	574,012	468,907	1,042,919
1888	599,107	486,633	1,085 740

Change in relative population of N.S.W. and Victoria.

Three causes have combined to bring about the satisfactory change which has reversed the relative positions of Victoria and New South Wales in regard to population—the natural increase by births over deaths; the selection of this Colony as a place of settlement by a large number of unassisted immigrants; and the assistance given by the Government to persons in the United Kingdom, and elsewhere, to make New South Wales their home. Regarding the first of these causes, it may be mentioned that, owing to its high birth-rate and comparatively low death-rate, the Colony now receives yearly an addition to its population of 6,000 more than its southern neighbour.

Annual increase.

The increase of population, from the excess of births and immigration, over deaths and departures, has been fairly regular. In 1879, the year of the Sydney International Exhibition, there was a very marked increase in the excess of arrivals over departures; and though, as would naturally be expected, the subsequent year showed a falling off, the impetus given to immigration to the Colony by the Exhibition is still felt.

Largest increase in 1885.

The largest increase of population in any one year occurred in 1885, when, owing to the depression prevailing in some of the neighbouring colonies, large numbers of adult males flocked to New South Wales, in search of a livelihood they could scarcely obtain elsewhere. The result of this influx was felt during the following years in the congestion of the local labour market. Numbers of persons were unable to find employment, and their circumstances were considerably aggravated by several unfortunate seasons which the Colony has since experienced.

Net increase.

The following table gives the net increase of male and female population during each year since 1871, after allowing for the number of persons whose departure from the Colony was not formally recorded.

Increase of Population.

ar.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
71	10,303	8,796	19,099	1880	18,351	14,083	32,434
72	9,169	8,292	17,461	1881	21,667	15,130	36,797
73	9,384	9,230	18,614	1882	16,370	15,773	32,143
74	11,444	9,666	21,110	1883	26,695	20,216	46,911
75	10,237	9,117	19,354	1884	25,562	20,642	46,204
76	10,435	9,449	19,884	1885	31,962	22,004	53,966
77	16,814	12,712	29,526	1886	23,810	20,242	44,052
78	15,296	12,885	28,181	1887	22,669	18,284	40,953
79	21,301	16,270	37,571	1888	25,095	17,726	42,821

Annual rate of Increase—Australasia.

n the following table will be found the rate at which population increased during each of the last ten years, in the various nies, the average rate for Australasia being 3·82 per cent.

Growth of Population.—Increase per cent. per annum.

	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
9	5·59	1·59	2·71	4·29	1·78	2·29	7·21
0	4·57	2·34	3·12	3·13	1·22	2·04	4·56
1	4·96	2·32	4·30	7·01	3·43	3·63	3·31
2	4·13	2·27	9·38	2·51	2·51	2·99	3·35
3	5·79	2·39	15·80	3·75	3·04	3·05	4·48
4	5·39	2·64	5·08	2·71	3·97	3·42	3·00
5	5·97	2·65	4·43	0·21	6·76	2·49	3·25
6	4·60	3·29	8·60	— 0·21	12·50	2·56	2·46
7	4·09	3·30	7·10	— 0·11	7·34	3·84	2·37
8	4·10	5·28	5·59	0·21	— 0·83	2·58	0·67
an of 0 years.	4·92	2·80	6·55	2·32	4·11	2·89	3·45

Minus sign (—) denotes a decrease.

d advan- of N.S.W. tlers.

As tested by the voluntary influx of population the advantag which New South Wales has for many years offered to the settl- are most marked, and no test could be more practical. As lon as the balance of attraction remained with the other colonie so long did the tide of immigration set to their shores; but fo many years past New South Wales has offered a more substanti reward to the settler than any of its neighbours, and the result i seen in the increased numbers who have come hither.

tary influx of erity.

Taking the period from the beginning of 1871 to the close o 1888, the total excess of arrivals over departures (allowing also fo unrecorded departures) in all the Australasian colonies amounte to 757,686; of this number not less than 284,667, or 37·57 per cen found a home in New South Wales. Only 93,557, or 12·35 pe cent., went to Victoria; 187,915 (24·80 per cent.) to Queensland 148,726 (19·63 per cent.) to New Zealand; 10,348 (1·37 per cent. to Tasmania; 7,995 (1·05 per cent.) to Western Australia; an 24,478 (3·23 per cent.) to South Australia. No more eloquen tribute could be paid to the resources of New South Wales than i conveyed by the bare statement of these figures.

Since 1860, the year following the separation of Queensland, th arrivals in New South Wales have in every year exceeded the depar- tures. The greatest apparent excess during any one year was in 1885, when the number of arrivals was greater than the depar- tures by 39,683. From the date of the separation of Queensland to the close of the year 1888, the Colony has benefited by arrivals to the extent of about 408,343. The total number of persons arriving here during the period just mentioned was 1,051,962, and of this number 78,985 were State assisted.

Assisted immigration dates from 1832, and continued to be th settled policy of the country, with slight interruptions, until it partial cessation during the past year. The number of assiste immigrants arriving in New South Wales from 1860 to the clos of 1888 will be found below.

Assisted Immigrants.

	Adults.			Children under 12 Years.			Total.
	Males.	Females.	Total.	Males.	Females.	Total.	
0	1,351	1,235	2,586	245	258	503	3,089
1	794	595	1,389	101	99	200	1,589
2	1,172	1,047	2,219	214	198	412	2,631
63	1,966	1,872	3,838	391	404	795	4,633
64	1,701	1,672	3,373	289	315	604	3,977
65	1,073	1,214	2,287	213	217	430	2,717
66	501	543	1,044	92	68	160	1,204
67	385	435	820	66	58	124	944
68	183	215	398	41	31	72	470
69	......	47	47	......	......	......	47
70	......	......	......	......	......	......	......
71	28	299	327	15	15	30	357
72	25	271	296	16	14	30	326
73	13	119	132	3	5	8	140
74	427	411	838	109	133	242	1,080
75	395	324	719	135	119	254	973
76	642	429	1,071	208	184	392	1,463
77	2,892	1,627	4,519	743	756	1,499	6,018
78	2,091	1,754	3,845	699	646	1,345	5,190
79	1,906	2,141	4,047	840	844	1,684	5,731
80	1,150	1,195	2,345	414	375	789	3,134
81	929	1,029	1,958	327	292	619	2,577
82	1,209	991	2,200	509	524	1,033	3,233
83	3,370	2,718	6,088	1,154	1,127	2,281	8,369
84	2,785	2,606	5,391	1,095	1,082	2,177	7,568
85	1,871	2,211	4,082	736	736	1,472	5,554
86	1,044	1,905	2,949	572	560	1,132	4,081
87	131	687	818	286	258	544	1,362
88	58	190	248	149	131	280	528
al ...	30,092	29,782	59,874	9,662	9,449	19,111	78,985

e birthplaces of immigrants cannot in all cases be accurately mined, but it is quite clear, from the different census returns, the great bulk have come from the United Kingdom, as will ntly appear. A record, however, has been kept of the native ries of immigrants who were assisted by Government, and e 78,985 persons enumerated in the foregoing table, 77,284 British born—37,136 being from England and Wales; 1 from Ireland; and 8,367 from Scotland; and the remainder, , from other countries.

Birthplaces of immigrants.

CENTRALIZATION OF POPULATION.

Tendency of immigrants to live in large cities.

There is a tendency operating in all new countries for immigrants to locate themselves in and near the large cities. This Colony has been no exception to the rule, and it will be seen from subsequent tables that the percentage of British born and Foreigners residing in the metropolis is higher than for the rest of the Colony, and the native-born correspondingly lower.

Proportion of native-born increasing.

As far back as 1861, when the native-born population amounted to only 45·68 per cent. of the whole Colony, the number living in Sydney and its suburbs formed only 42·92 per cent. of the total while British born colonists, amounting to 46·18 per cent. of the population, constituted 51·01 per cent. of the metropolitan population. No great difference is observable between the proportion of persons attracted to New South Wales from other colonies who remained in Sydney during late years, and those who made the country districts their home. What difference there is favours the supposition that Sydney has proved more attractive. The non-British population have, as a rule, preferred the country districts to Sydney; but of late years there has been a tendency on the part of certain foreign elements to gravitate towards Sydney; this is especially noticeable amongst the Chinese.

Birthplaces of the people.

The following table shows the proportion per cent. of each element of the population at the three periods 1861, 1871, and 1881, to the whole city population, and also the proportion which each bore to the whole community:—

Birthplaces of the People.

Year.	Native Born of New South Wales.		Natives of other Australian Colonies		English, Irish, and Scotch.		Foreign.	
	Per cent. of population, metropolitan.	Per cent. of total population.	Per cent. of population, metropolitan.	Per cent. of total population.	Per cent. of population, metropolitan.	Per cent. of total population.	Per cent. of population, metropolitan.	Per cent. of total population.
1861	42·92	45·68	1·81	1·34	51·01	46·18	3·94	6·80
1871	54·22	58·38	3·07	2·67	39·33	34·56	3·33	4·29
1881	56·87	61·96	6·17	6·94	33·36	27·74	3·60	4·11

Racial composition of people.

e racial composition of the people at the last three census 1861, 1871, and 1881—will be seen from the following :—

Racial Composition of Population.

Nationality.	1861.	1871.	1881.
	per cent.	per cent.	per cent.
South Wales	45·68	58·38	61·96
r Colonies	1·34	2·67	6·94
igines	...	0·19	0·22
ish	23·98	17·33	14·31
	15·62	12·49	9·21
ch	5·20	3·98	3·34
sh	0·39	0·37	0·41
r British Subjects	0·99	0·39	0·47
Total, British Subjects	93·20	95·80	95·86
ese	3·71	1·43	1·63
man	1·56	1·32	1·00
er Foreigners	1·53	1·45	1·78
Total, Foreigners	6·80	4·20	4·14

t is probable that out of a total population of 1,085,740 at the of 1888, that 698,982 (353,473 males and 345,509 females) e natives of the Colony.

Tendency of population towards cities.

ne of the most notable problems in the progress of modern lization is the tendency, everywhere exhibited in the chief ntries of the world, of the population to accumulate in great es. Not only is this apparent in England, France, and other countries where the development of manufactures has broug about an entire change in the employment of the people, and h necessarily caused their aggregation in towns, but it is seen al in the United States, the most favoured country for the agricu tural labourer.

Comparison of Colonies with America.

The conditions of progress in these colonies approximate som what to those of the United States, and a comparison between th increase of town population there and in New South Wales is n without interest. The great defect in the comparison arises fro the fact that in America there exist many large cities; in Ne South Wales there is practically only one. The population of t United States for three periods, and the proportion of rural city population, will be seen below.

Population of the United States.

Year.	Population of the United States.	Population of Cities of United States.	Percentage of wh population in Cit
1860	31,443,321	5,072,256	16·1
1870	38,558,371	8,071,875	20·7
1880	50,155,783	11,318,547	22·5

Causes which lead to increase in cities.

The rapid increase of city population shown above has giv rise to considerable speculation, both in Europe and Ameri It seems an established fact that the movement of populati towards the towns in the old countries of the world is a sign improvement in the circumstances of the ruder population; f like every other commodity, labour gravitates to the market wh it will obtain the highest price. In America the increase in to population has been derived mainly from abroad; and there see no reason to suppose that, large as the proportion of urban po lation has become, it has reached an unhealthy stage.

Urban and rural population.

In this Colony the proportion of town population is even m remarkable than in the United States, as will be seen from t here given, showing the percentage of population of Sydney suburbs as compared with New South Wales as a whole.

New South Wales Population.

Year.	Metropolitan.	Country.
	Per cent.	Per cent
1861	26·70	73·30
1871	26·73	73·27
1881	29·40	70·60
1885	32·84	67·16
1886	33·36	66·64
1887	33·64	66·36
1888	33·77	66·23

In regard to the neighbouring Colony of Victoria, the figures :—

Victorian Population.

Year.	Metropolitan.	Country.
	Per cent.	Per cent.
1861	25·89	74·11
1871	28·87	71·13
1881	32·81	67·19
1885	35·42	64·58
1886	37·65	62·35
1887	37·79	62·21
1888	40·13	59·87

Fewness of Australasian cities.

In the table of urban population of the United States on the preding page, is included the population of all towns exceeding 8,000 habitants; nevertheless, the proportion to the whole is much than in either New South Wales or Victoria. The case of elbourne is even more marked than that of Sydney; for during the enty-seven years comprised in the table, the former city increased roportionately more than the latter, as compared with the poputíon of its Colony, though its numerical increase has not been so reat.

Population of the City and Suburbs of Sydney and Melbour

Year.	Sydney.	Melbourne.
1861	95,596	139,860
1871	136,483	206,780
1881	224,211	282,947
1884	289,201	322,690
1885	314,545	345,380
1886	334,298	371,630
1887	350,866	391,546
1888	366,684	437,785

Extraordinary progress of Sydney and Melbourne.

The progress of these cities has been extraordinary, and has parallel amongst the cities of the Old World. Even in Ame the rise of the great cities has been accompanied by a somew corresponding increase in the rural population. In these colon perhaps for the first time in the history of the world, is seen spectacle of magnificent cities growing with wonderful rapidi and embracing within their limits one-third of the population the territory on which they depend. The chief cities of the ot Australian Colonies present somewhat similar features to Syd and Melbourne, but with the exception of Adelaide, which conta nearly two-fifths of the whole population of South Australia, t are not so large in proportion to their rural population as eit Sydney or Melbourne.

Population of Australasian cities.

The estimated population of the chief cities of the Australas Colonies is given below.

City.	Population.	Year.
Sydney	366,684	1888
Melbourne	437,785	1888
Adelaide	119,465	1888
Brisbane	84,000	1888
Wellington	31,200	1888
Hobart	34,417	1888
Perth	9,500	1888

Wellington, the capital of New Zealand, is not the m populous city in that colony; Auckland, which was the seat Government and the capital until 1865, contains nearly dou the population, the estimate for 1888 being about 61,700.

Growth of Sydney.

ydney stands alone amongst Australian cities for convenience osition and natural advantages for external and internal trade. has the progress it has made in wealth and population been than expectation warranted. The growth of population within municipal boundaries of the city forms an interesting feature he progress of the Colony. In the table given below the population set down for the years previous to 1871 is that ascertained the date of different census; from 1871 the figures show the imated population at the close of the year.

Population of Sydney within its Municipal Boundaries.

Year.	Persons.	Male.	Female.	Year.	Persons.	Male.	Female.
1828	10,815	7,408	3,407	1876	87,261	44,440	42,821
1833	16,232	9,813	6,419	1877	91,008	46,832	44,176
1836	19,729	12,111	7,618	1878	94,228	48,809	45,419
1841	29,973	17,169	12,804	1879	98,824	51,748	47,076
1846	38,358	20,810	17,548	1880	102,161	53,910	48,251
1851	44,240	22,296	21,944	1881	106,578	56,793	49,785
1856	53,358	26,396	27,032	1882	110,112	58,828	51,284
1861	56,394	27,285	29,109	1883	115,847	62,603	53,244
1871	77,680	38,631	39,049	1884	121,441	66,152	55,289
1872	79,455	39,663	39,787	1885	122,910	67,380	55,530
1873	81,482	40,774	40,708	1886	124,379	68,607	55,772
1874	83,631	42,123	41,508	1887	125,850	69,418	56,432
1875	85,267	43,191	42,076	1888	127,449	70,082	57,367

Growth of metropolitan population.

At the census of 1861 the population of the whole metropolis was 95,596; ten years later it had risen to 136,483; while at the ensus of 1881 the number had reached 224,211; and in 1888 the estimated number of persons in Sydney and its suburbs was, as already stated, 366,684. The progress of the population in the city and suburbs will be found in the following table, which also includes the country districts, and the whole Colony, commencing with the year 1870.

Estimated Population of the Colony, City, Suburbs, and Country Districts, on 31st December in each year, 1870–88.

Year.	Colony.			City.			Suburbs.			Country.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1870	272,543	226,116	498,659	37,349	38,144	75,493	28,497	30,588	59,085	206,697	157,384	364,081
1871	282,846	234,912	517,758	38,631	39,049	77,680	30,662	32,279	62,941	213,553	163,584	377,137
1872	292,015	243,204	535,219	39,668	39,787	79,455	32,440	33,870	66,310	219,907	169,547	389,454
1873	301,399	252,434	553,833	40,774	40,708	81,482	34,207	35,757	69,964	226,418	175,969	402,387
1874	312,843	262,100	574,943	42,123	41,508	83,631	36,583	37,964	74,547	234,137	182,628	416,765
1875	323,080	271,217	594,297	43,191	42,076	85,267	38,756	40,052	78,808	241,133	189,089	430,222
1876	333,515	280,666	614,181	44,440	42,821	87,261	40,939	42,314	83,253	248,136	195,531	443,667
1877	350,329	293,378	643,707	46,832	44,176	91,008	45,019	46,298	91,317	258,478	202,904	461,382
1878	365,625	306,263	671,888	48,809	45,419	94,228	48,358	50,360	98,718	268,458	210,484	478,942
1879	386,926	322,533	709,459	51,748	47,076	98,824	53,547	45,901	109,448	281,631	219,556	501,187
1880	405,277	336,616	741,893	53,910	48,251	102,161	57,932	60,078	118,010	293,435	228,287	521,722
1881	426,944	351,746	778,690	56,793	49,785	106,578	63,746	64,968	128,714	306,405	236,993	543,398
1882	443,314	367,519	810,833	58,828	51,284	110,112	67,629	70,490	138,119	316,857	245,745	562,602
1883	470,009	387,735	857,744	62,603	53,244	115,847	74,530	78,420	152,950	332,876	256,071	588,947
1884	495,571	408,377	903,948	66,152	55,289	121,441	81,194	86,566	167,760	348,225	266,522	614,747
1885	527,533	430,381	957,914	67,380	55,530	122,910	93,130	98,505	191,635	367,023	276,346	643,369
1886	551,343	450,623	1,001,966	68,607	55,772	124,379	103,268	106,651	209,919	379,468	288,200	667,668

The increase of the city population during the eighteen years which closed with 1888 has been 69 per cent., and of the suburbs 105 per cent., or 172 per cent. for the metropolis, while that of the country districts amounted to 97 per cent. The population of the whole Colony has more than doubled itself during this period; the total for 1888 showing an increase of 118 per cent. on the total for 1870.

Area of the metropolis.

The area of the metropolitan district incorporated is nearly 120 square miles, or 76,417 acres, so that the average density of population was 4·8 persons per acre at the end of the year, or 47·4 per acre for the city and 3·2 for the suburbs. Some of the more immediate suburbs are, however, almost as densely populated as the city itself. The area of land permanently dedicated for public recreation in the metropolis comprises 2,981 acres (776 acres in the city, and 2,205 in the suburbs), equal to about one twenty-fifth of the total extent of the district, which must certainly be looked upon as a very liberal provision for the maintenance of public health. This is quite apart from the National Park, an area of 36,320 acres, which is within an hour's journey by train of the city. The area of Melbourne and suburbs has been estimated at 256 square miles, and the population at the close of the year 1888 at 437,785. The area taken for Melbourne is an arbitrary one, being that included within a radius of 10 miles of the centre of the city. An area of 256 square miles around Sydney would include Parramatta and district, and would at the close of 1888 have embraced a population of probably not less than 386,000—a number still less than the Melbourne metropolitan population.

The suburbs of Sydney consist of the following districts, which are here grouped according to locality:—*North-western*—Balmain, Leichhardt, Glebe; *West Central*—Newtown, St. Peters, Camperdown, Macdonaldtown; *East Central*—Redfern, Darlington, Waterloo, Alexandria, Botany; *Eastern*—Paddington, Randwick, Waverley, Woollahra; *Western and Southern*—Ashfield, Burwood, Canterbury, Five Dock, Hurstville, Kogarah, Marrickville, Petersham, Rockdale; and *North Shore*—St. Leonards, Manly.

Suburbs of Sydney.

The population of the suburbs has more than doubled itself since the census of 1881. The increase has been general, varying from 60·16 per cent. in the east central districts of Redfern, Waterloo, &c., to 170·95 per cent. in the western and southern suburbs, which constitute the *electorate* of Canterbury:—

Suburbs.	Population, 1881.	Population, June, 1889.	Increase per cent.
North-western	27,785	58,240	109·61
West central	15,991	33,935	112·21
East central	25,664	41,104	60·16
Eastern	20,220	38,400	89·91
Western and Southern	20,162	54,630	170·95
North Shore	11,010	20,288	84·27

Municipalities.

The suburbs of Sydney comprise several distinct municipalities. The population of those in existence at the date of the last census, and at the middle of the year 1889, will be found below.

Population of the various Municipalities.

Municipality.	Population at Census of 1881.	Estimated population June, 1889.	Municipality.	Population at Census of 1881.	Estimated population June, 1889.
Alexandria	3,449	6,833	Marrickville	3,501	12,000
Ashfield	4,087	9,900	Newtown	8,327	17,500
Balmain	15,063	27,000	North Willoughby	1,411	1,828
Botany	......	2,063	Paddington	9,608	16,000
Botany, North	......	2,000	Petersham	3,413	10,200
Burwood	2,472	5,100	Randwick	2,079	4,200
Camperdown	3,522	5,900	Redfern	10,868	19,600
Canterbury	1,175	2,600	Rockdale	858	3,500
Concord	......	2,500	St. Leonards, East	2,320	5,250
Darlington	2,026	2,988	St. Leonards	2,647	7,315
Five Dock	888	1,930	St. Peters	2,272	5,000
The Glebe	10,500	15,540	Strathfield	......	900
Hurstville	......	2,500	Victoria	2,182	3,395
Kogarah	......	2,000	Waterloo	5,762	7,620
Leichhardt	1,866	15,700	Waverley	2,365	8,900
Macdonaldtown	1,870	5,535	Woollahra	6,168	9,300
Manly	1,327	2,500			

Municipalities over 2,000 inhabitants

the time of the census of 1881 there were only twenty-six cipalities outside the metropolis which contained as many as) inhabitants, but now there are fifty-one. The following heir names and the most recent estimates of population :—

pulation of Chief Country Municipalities, 30th June, 1889.

Country nicipalities.	Estimated Population.	Country Municipalities.	Estimated Population.	Country Municipalities.	Estimated Population.
ry	6,000	Gulgong	2,000	Newcastle	15,000
idale	3,000	Hamilton	4,500	Orange	4,000
urst	10,000	Hay	2,700	„ East	2,000
	2,000	Hunter's Hill	2,500	Parramatta	12,000
ke	2,330	Illawarra, Central	2,000	Penrith	3,495
ral	2,000	„ North	2,000	Plattsburg	4,000
en Hill	12,600	Junee	2,000	Ryde	2,250
r	2,000	Kempsey	2,900	Singleton	2,000
amundra	2,200	Kiama	3,500	Tamworth	2,750
gegong	2,500	Lambton	4,000	Wagga	4,500
liquin	2,500	Lismore	2,290	Wallsend	3,425
bo	4,000	Liverpool	2,800	Waratah	2,200
es	2,700	Maitland, East	3,000	Wickham	4,155
Innes	3,000	„ West	6,000	Wilcannia	2,000
lburn	12,000	Merewether	4,095	Windsor	3,000
ton	5,200	Mudgee	3,000	Wollongong	4,000
wille	3,000	Narrabri	2,230	Young	2,855

Population densest along seaboard.

he great bulk of the population dwells along the seaboard. side the metropolis the most thickly peopled districts are the ile valleys of the rivers. Amongst these, in point of popula- , the Hunter River valley, with large agricultural and mining stries, stands first. The Illawarra district, rich in coal and ure, comes next ; then the maize and sugar-growing country he Clarence and the Richmond. The settlement of population inally followed the main roads of the Colony, and is now drawn he great trunk lines of railway, which have almost superseded m.

NATURALIZATION.

There were 106 foreigners naturalized in this Colony during the r 1888. Their ages varied from 22 to 70, and their length of idence in New South Wales ranged from five to thirty-four

Naturalization of Germans.

years. Sixteen had been resident more than twenty years the Colony. Of European races the Germans have availed th selves most largely of the privileges of naturalization, but number of certificates issued to Germans amounts to scarcely m than half the number granted within the past ten years to Chin The following table shows the native countries of those coloni who obtained certificates of naturalization during each year, fr 1878 to 1888 :—

Naturalization of Foreigners.

Native countries.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	To
France	3	1	1	5	3	4	3	10	8	8	7	
Spain	1	3	...	...	...	...	1	...	...	...	1	
Portugal	...	2	2	1	1	1	...	...	...	...	3	
Switzerland ...	1	1	5	1	...	4	4	1	3	1	1	
Italy	...	4	3	4	3	4	3	4	5	6	6	
Germany	56	39	43	34	32	46	44	47	45	48	32	
Austria	2	1	...	4	1	3	8	1	5	3	3	
Holland	1	4	1	2	...	2	2	1	2	3	1	
Belgium	...	1	...	...	...	...	...	...	2	...	...	
Denmark	7	2	13	7	5	12	11	7	18	19	10	
Norway	1	1	...	8	1	3	6	3	4	5	9	
Sweden	6	8	12	7	5	13	8	17	10	13	17	
Russia	3	...	1	2	2	2	3	7	6	3	5	
Poland	...	1	1	...	...	2	4	4	4	3	5	
Greece	2	...	...	1	1	2	1	1	2	3	2	
Bulgaria	...	...	...	...	...	...	1	...	...	...	...	
Roumania	...	...	...	...	...	...	...	..	...	...	1	
China	15	23	18	31	93	301	265	22	5	1	...	
Hongkong	...	2	1	...	...	...	...	...	...	..	...	
India	...	1	...	...	...	...	...	...	...	...	...	
Syria	...	. .	...	...	...	...	...	...	...	...	3	
Penang	...	...	...	...	...	...	...	...	...	1	...	
Persia	...	...	...	...	...	1	...	...	...	...	...	
America	...	...	1	...	...	4	2	...	...	1	...	
United States	...	1	...	...	...	1	...	2	1	...	...	
Western Islands..	...	1	...	1	...	...	...	1	4	..	...	
Corsica	...	...	...	...	...	1	...	...	...	...	...	
New Caledonia ..	...	...	...	...	...	...	...	...	...	1	...	
Unknown	...	...	...	...	...	...	1	...	...	...	...	
Total	98	96	102	108	147	406	367	128	124	119	106	1,

Large number of Chinese naturalized.

From this it will be seen that the Chinese have, more than other nation, evinced of late years a desire to become Bri subjects ; and the tendency is even more marked in Victoria, wh out of 4,254 persons naturalized during the seventeen years

1871 to 1887, no fewer than 2,969 were born in China, the greatest number naturalized in any one year being 1,178 in 1885. The total number of persons naturalized in New South Wales from 26th July, 1849, to 31st December, 1888, was 5,815.

Of those naturalized during 1888, 3 were medical practitioners, 2 chemists, 1 professor of languages, 3 merchants, 2 civil engineers, 2 jewellers, 1 engraver, 1 electrician, 1 engineer, 1 pianoforte-maker, 1 auctioneer, 1 draftsman, 2 blacksmiths, 3 bootmakers, 2 butchers, 9 carpenters, 2 coppersmiths, 1 fettler, 1 saddler, 1 sawyer, 2 tailors, 2 tanners, 1 tobacconist, 2 fishmongers, 13 labourers, 2 hawkers, 1 dealer, 1 coachman, 14 mariners, 12 farmers, 1 vine-dresser, 1 florist, 2 gardeners, 3 miners, 1 warehouseman, 1 clerk, 1 teacher, 1 storekeeper, 2 hospital warders, 1 brewer's assistant, and 2 pawnbrokers.

CHINESE POPULATION.

Chinese undesirable colonists.

The uniformity with which the different colonies have passed laws restricting the immigration of Chinese, and prohibiting their landing, except upon payment of a heavy poll-tax, may be taken as some evidence of the undesirability of the race as colonists. At the census of 1861 there were in the Colony 12,988 Chinese; in 1871 the number had fallen to 7,220; rising again in 1881 to 10,205. For many years New South Wales offered little inducement to the Chinese as a place of settlement, the superior attractiveness of Victoria and other colonies, as gold producers, claiming their attention. At the rush to Lambing Flat in 1860, however, large numbers of Chinese came across the border and established themselves in this Colony, their strength being constantly recruited by fresh arrivals from China; but these Chinese did not remain in the Colony, for at the census of 1871 there were 5,768 less than ten years previously. Of late years the number of Chinese has largely increased and at the beginning of 1889 there were rather more than 16,800 residing in the Colony.

Immigration and emigration of Chinese.

The numbers of Chinese arriving at and departing from New South Wales since 1871 will be found in the following table :—

Year.	Arrivals.	Departures.	Year.	Arrivals.	Departures.
1871	426	441	1880	2,942	876
1872	229	597	1881	4,465	929
1873	406	400	1882	1,007	884
1874	863	933	1883	1,936	1,402
1875	625	1,209	1884	2,191	1,038
1876	696	940	1885	2,929	1,726
1877	884	490	1886	3,092	1,883
1878	2,485	1,560	1887	4,436	2,773
1879	1,979	557	1888	1,848	1,562

Influx of Chinese to New South Wales.

It will be seen that 1878 and the following years are marked by a large increase in the arrivals from China. The influx appeared in 1881 sufficiently formidable to demand the interference of the Legislature. Accordingly the Influx of "Chinese Prevention Act" was passed, with the result that the subsequent year was marked by a decrease in the arrivals to the extent of 3,458, since which time there has been a steady increase until last year. It would seem, from a comparison of the amount of poll-tax (£10 a head) collected with the recorded arrivals, that a very considerable proportion of the Chinese immigrants were already British subjects, or had availed themselves of the privilege granted by the Act of returning to the Colony after an absence of nine months without paying a second tax. In fact this is so to a large extent, for from the 6th December, 1881, the date of the Act just mentioned, to the close of 1888, 3,178 certificates of exemption were issued in this Colony to Chinese, the date of the last certificate being the 28th pril, 1888, and of this number 1,788 have been received from urned Chinese. Still, the large excess of Chinese not paying e tax would favour the supposition that considerable evasion s been practised. One returned Chinese not arriving until ter the expiration of the nine months allowed in certificate, as charged the poll-tax of £100, in accordance with the new ct, reference to which is made below :—

Evasion of poll-tax.

Year.	Chinese arriving.	Chinese paying Poll-tax.	Chinese not paying Poll-tax.
1882	1,007	852	155
1883	1,936	1,220	716
1884	2,191	1,074	1,117
1885	2,929	1,060	1,869
1886	3,092	1,284	1,808
1887	4,436	1,798	2,638
1888	1,848	462	1,386

Chinese immigration in Australia increasing.

There has very clearly been an increasing desire during the last few years on the part of the Chinese to migrate to Australia. This of late brought about considerable discussion, which culminated in a Conference of delegates from all the colonies being held in Sydney last year. As a result, the Conference prepared a draft bill, which was afterwards submitted to the Parliaments of the different colonies. The bill provided that more stringent regulations should be enforced to check the influx of Chinese to these shores ; and although it was not deemed advisable that their landing should be prohibited altogether, yet it was considered necessary that such a limit should be placed to the numbers privileged to land as would prove an efficient check to Chinese immigration. Before the Conference met, progress had been made in the New South Wales Legislature with a bill which was proceeded with after the Conference adjourned, and became law on the 11th July, 1888. By this measure vessels are prohibited from carrying to the Colony more than one Chinese passenger to every 300 tons ; Chinese landing are to pay a poll-tax of £100, and are not to engage

Recent legislation against influx.

in mining, nor are they permitted to become naturalized. Th penalty for a breach of the Act is £500. The Act has already operated to the entire cessation of Chinese immigration.

Chinese in the Colonies in 1888.

It is estimated that in the year 1888 there were 50,600 Chinese in the Australasian colonies, exclusive of Fiji. This number was distributed as follows:—New South Wales, 16,800; Victoria, 12,560; Queensland, 8,250; South Australia (chiefly in the Northern Territory), 6,900; New Zealand, 4,690; Tasmania, 1,000; and Western Australia, 400. When the census of 1881 was taken the total number in the colonies was set down as 43,706.

Chinese in the Australasian Colonies, 1881.

Colony.	Males.	Females.	Total.
Victoria	11,869	259	12,128
Queensland	11,206	23	11,229
New South Wales	10,141	64	10,205
New Zealand	4,995	9	5,004
South Australia	4,146	5	4,151
Tasmania	842	2	844
Western Australia	145	...	145
Total	43,344	362	43,706

ABORIGINES.

Aborigines.

This name, signifying "without origin," was given to th earliest known inhabitants of Italy, but is now applied to th original or primitive inhabitants of any country. As the recent history of the native race in these colonies is so entwined wit the progress of the British people in Australia, a few words con cerning them may not be out of place. The aborigines o Australia form a distinct race, and it may be presumed that th whole of those existing on this continent sprang from the sam stock, although it is remarkable that their languages differ s greatly that tribes within short distances of each other are quit strangers and often antagonistic, and that almost every large com munity of natives has its own peculiar dialect. It is difficult t form a correct estimate of their numbers, and while there is reason to believe that some generations ago they were very numerous, there is ample evidence of late years that in many places they are decreasing; and they may now be counted by fives where they were formerly counted by hundreds. In Tasmania they have disappeared altogether, the last of the tribe in that colony having died in 1876.

Estimate by Governor Phillip.

It is recorded that Governor Phillip estimated the aboriginal population about the close of the last century at one million; the number between Broken Bay and Botany Bay appearing to have been about 3,000. It is impossible to say how far this estimate was in accordance with fact; for, although at the time it did not probably seem an exaggerated conjecture in the face of so large a number as 3,000 having been found within the small area between the bays above mentioned; yet, considering how small a portion of the territory was then explored by the early settlers, the statement must be accepted according to what it professes to be, namely, an estimate at a time when the data to hand were very limited. At the census of 1881 the aborigines in Australia were believed to number 31,700, distributed as follows:—

Aborigines at census of 1881.

Aborigines in the Australian Colonies, 1881.

Colony.	Males.	Females.	Total
New South Wales	938	705	1,643
Victoria	460	320	780
Queensland	10,719	9,866	20,585
South Australia	3,478	2,868	6,346
Western Australia...........	1,640	706	2,346
Total..................	17,235	14,465	31,700

Estimate untrustworthy.

There are various reasons for believing that the above total does not include the entire aboriginal population of the colonies. In New South Wales, for instance, only the "civilized" blacks were enumerated in the returns, and, from reliable information since available, it is certain that the actual number, including those in a wild state, was much higher. The figures for Queensland are in a great measure derived from estimates which are considered by the Registrar-General of that colony to be too low, for in his report on the census he says :—"In the northern parts of the Colony the aborigines are comparatively numerous, and some persons resident in the Cook and Palmer districts have supposed that there may be 70,000 in Queensland. This, however, is a very crude estimate, and may be far wide of the truth." In the case of South Australia, as the aborigines in the Northern Territory were not included in the returns, it seems probable that they are as numerous in that Colony as in Queensland. The census of Western Australia includes only those aboriginals in the employment of the colonists, and as large portions of this, the greatest in area of all the Australasian Colonies, are as yet unexplored, it may be presumed that the number of aborigines enumerated in the census is very far short of the total in the Colony. The aboriginal population of the entire Continent may be set down at something like 200,000.

The Maoris.

The original inhabitants of New Zealand, or Maoris, as they are called, are quite a different race. They are gifted with a considerable amount of intelligence, quick at imitation, and brave even to rashness; on the other hand they are avaricious, and ofttimes ferocious. According to the census of 1881 they numbered 44,097. Like the Australian aborigines they appear to be decreasing in number, the census of 1886 enumerating only 41,432. The total in 1888 was estimated to be about 42,000 (23,000 males and 19,000 females). It is believed, however, that at the time the colonists first landed their number was fully 120,000.

Aborigines decreasing.

It is stated in the annual report of the Aborigines Protection Board that there were 7,485 aborigines in New South Wales in 1888, as compared with 7,902 in 1887. These totals include half-castes, which last year numbered 2,767, and in 1887, 2,860. The number of full-blood aborigines has therefore decreased by 324, and the half-castes by 93. The number of births reported during 1888 was 336 (136 of the children being half-castes), and the deaths 320 (75 half-castes). But, notwithstanding the births outnumbered the deaths by 16, there was a decrease of 417; and this is accounted for by numbers of the aborigines on the borders leaving their districts for the adjacent colonies, owing probably to the dryness of the season, and the discontinuance to a large extent of rabbit trapping. During the year 8,290 blankets were forwarded from the Government Stores Department to the various Benches of Magistrates for distribution. This bounty has been conceded for many years. Compared with the above returns, the number enumerated by the census appears small, and shows that the aboriginals passed over as being in a wild state far outnumbered those within the bounds of civilization.

Crimes and misfortunes of native blacks.

It has been the misfortune of the aborigines of Australia, as it was of the Carribee, the North American Indian, and the Hottentot, to be found in the way of European colonization; and the blacks have not seen the white man take possession of their territory without many an attempt, by deeds of cunning and of blood, to stop the invasion and to avenge the injury. It would be easy to gather from the records of British colonization in Australia many instances of horrible crimes committed by the aborigines. They are, in fact, partakers of the worst passions of human nature. But it must not be forgotten that, amongst the people of British origin who settled upon the land, formerly occupied by the blacks alone, were many whose crimes against the aborigines at least equalled in atrocity any committed by that unfortunate race. Cunning and ferocity were the natural concomitants of such a struggle; and the remembrance of what cunning and ferocity have done tends to make the colonists slow to recognize any characteri of an opposite kind in the blacks. There is, however, evid from their songs and their cherished traditions,* that they ar no means destitute of some qualities in which civilized men g —such as the power of inventing tragic and sarcastic fiction, thirst for religious mystery, stoical contempt of pain, and revere for departed friends and ancestors. The manner in which t have displayed these characteristics presents such a strange n ture of wisdom and folly, of elevating and degrading thoughts interesting and of repulsive traditions, of pathetic and grotes observances, that in order to account for the apparent contra tions, recourse must be had to the supposition that this race descended from an ancient and higher civilization, of which t have retained some memorials.

Oral traditions.

DISTRIBUTION OF SEXES.

The relative proportion of males to females in the whole Col has undergone little change during the past twenty-five years will be seen from the following figures :—

Percentage of Males and Females to whole Population.

Year.	Males.	Females.
1861	56·57	43·43
1871	54·67	45·33
1881	54·71	45·29
1885	55·07	44·93
1886	55·03	44·97
1887	55·04	44·96
1888	55·18	44·82

Excess of male population.

The excess of male over female population is chiefly at the of from 20 to 50 years, and is caused by the large influx of m in the prime of life, from the neighbouring colonies and British Islands. New South Wales is especially strong in a male population, and the number of men between 20 and 50 years at the last census exceeded even Victoria, though the latter colony had then a gross population of 111,000 in excess of New South Wales. The figures for all the colonies show that there was, at the census of 1881, a population of 619,970 males between the ages named, of whom 175,473 were living in New South Wales.

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* *Vide* Kamilaroi and other Australian Languages, by Rev. W. Ridley, M.A.

Male Population of the Australasian Colonies between the ages of 20 and 50 years.

Colony.	Male population 20 to 50 years.
New South Wales	175,473
Victoria	168,444
New Zealand	120,585
South Australia	65,545
Queensland	62,241
Tasmania	20,941
Western Australia	6,741
Total	619,970

Males at self-supporting ages

It is customary in England and elsewhere to consider the self-supporting ages as from 20 to 60 years. Comparing the population of the different colonies at these ages, the result at the last census was still distinctly favourable to New South Wales, though the aggregate was less than Victoria.

Male Population at supporting ages, 20 to 60 years, in the Australasian Colonies.

Colony.	Male population 20 to 60 years.
New South Wales	200,208
Victoria	210,850
New Zealand	134,993
South Australia	73,778
Queensland	68,590
Tasmania	25,798
Western Australia	8,553

Greater number of males in country districts.

The greater portion of the excess of male population is in t country districts, the disparity between the sexes not being great in the metropolis. Taking the thirteen years ended 188 the percentage of males to females in the whole Colony, and i the city, suburbs, and country will be found below.

Proportion of Males and Females to every 100 persons in New South Wales.

Year ended 31 Dec.	Colony.		City.		Suburbs.		Country Districts	
	Proportion to 100 persons living.		Proportion to 100 persons living.		Proportion to 100 persons living.		Proportion to 10 persons living.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Femal
1876	54·30	45·70	50·93	49·07	49·17	50·83	55·93	44·07
1877	54·42	45·58	51·46	48·54	49·30	50·70	56·02	43·98
1878	54·42	45·58	51·80	48·20	48·99	51·01	56·05	43·95
1879	54·54	45·46	52·36	47·64	48·92	51·08	56·19	43·81
1880	54·63	45·37	52·77	47·23	49·09	50·91	56·24	43·76
1881	54·83	45·17	53·29	46·71	49·52	50·48	56·39	43·61
1882	54·67	45·33	53·43	46·57	48·96	51·04	56·32	43·68
1883	54·80	45·20	54·04	45·96	48·73	51·27	56·52	43·48
1884	54·82	45·18	54·47	45·53	48·40	51·60	56·65	43·35
1885	55·07	44·93	54·82	45·18	48·60	51·40	57·05	42·95
1886	55·03	44·97	55·16	44·84	49·19	50·81	56·83	43·17
1887	55·04	44·96	55·16	44·84	49·97	50·03	56·66	43·34
1888	55·18	44·82	54·99	45·01	50·61	49·39	56·73	43·27

Ages of the people.

A glance at the statement of ages of persons returned at th census of 1881, given below, will show at what ages the chi strength of the Colony lies. There is a gradual diminution in th number of persons at the different periods of life from infancy t old age—the only irregularity in the gradation being the larg umber of males between the ages of 20 and 25 years. New South Wales is almost the only colony which presents this satisfactory view of the ages of its people, approaching so nearly what should heoretically be found in a perfect community.

Ages of People in New South Wales at Census of 1881.

Ages.	Males.	Females.	Ages.	Males.	Females.
Under 5	56,169	54,954	50 to 55	15,649	8,835
5 to 10	49,877	49,141	55 ,, 60	9,086	5,923
10 ,, 15	45,071	43,408	60 ,, 65	8,350	5,528
15 ,, 20	38,169	37,565	65 ,, 70	5,134	3,148
20 ,, 25	40,056	34,481	70 ,, 75	3,461	2,057
25 ,, 30	35,050	25,488	75 ,, 80	1,645	992
30 ,, 35	29,361	21,278	80 and upwards..	1,277	637
35 ,, 40	27,338	19,067	Unspecified	1,788	628
40 ,, 45	24,242	15,293			
45 ,, 50	19,426	11,896		411,149	340,319

The following are the figures disclosed by the census of 1861, 871, and 1881 :—

Population at different census.

Population of New South Wales.

Year.	Males.	Females.	Total.
1861	198,488	152,372	350,860
1871	275,551	228,430	503,981
1881	411,149	340,319	751,468

MARRIAGES.

The number of marriages registered in the Colony has been increasing annually since 1874, the only exception being in 1887.

Marriage rate declining.

The rate per 1,000 of population has however been decl during the last five years, and 1888 presents a lower rate for many years past.

Marriages in New South Wales.

Year.	Marriages registered.	Per 1,000 of mean population.	Year.	Marriages registered.	Per 1 of m Popul
1871	3,953	7·77	1881	6,284	8·
1872	3,925	7·45	1882	6,948	8·7
1873	4,384	8·05	1883	7,405	8·
1874	4,343	7·69	1884	7,482	8·
1875	4,605	7·87	1885	7,618	8·1
1876	4,630	7·66	1886	7,811	7·
1877	4,994	7·94	1887	7,590	7·
1878	5,317	8·08	1888	7,844	7·
1879	5,391	7·80			
1880	5,572	7·68	Mean for 18 years ...		7·

Marriages in European countries

Compared with some European countries the proportio marriages to the whole population in the Colony appears s what less than might be anticipated, but it will be found tha circumstances of the countries where marriages are more la entered into are entirely dissimilar, and the national h different from our own. The highest European marriage-ra found in the dominions of two great empires, Germany Austria. The ratios for Prussia and the rest of Germany, an Hungary and the other portion of Austria, are given separ Their mean marriage-rates since 1870 have been declining ye year; and reference to the table will show that the average for each during 1881–87 was lower than the average for se years prior to 1881.

Marriages in United Kingdom.

The marriage-rate of the United Kingdom is always muc same as that of the Australasian Colonies, in spite of the paratively few marriages solemnized in Ireland. The inform in the following table is taken from the report of the Regi General of England.

iage-rate per Thousand of Mean Population in certain European countries.

tries.	Mean of 20 years, 1861–80.	1881.	1882.	1883.	1884.	1885	1886.	1887.	Mean of 7 years, 1881–87
and Wales	8·2	7·6	7·7	7·7	7·5	7·2	7·0	7·1	7·4
....	7·1	7·0	7·0	7·0	6·7	6·5	6·2	6·2	6·7
....	4·9	4·3	4·3	4·3	4·5	4·3	4·2	4·4	4·3
....	7·9	7·5	7·4	7·5	7·6	7·5	7·4	7·3	7·4
....	7·2	6·4	6·0	6·3	6·7	...	...	...	6·4
and	7·6	6·8	6·8	6·8	6·8	6·9	6·8	...	6·8
....	7·6	8·1	7·9	8·0	8·2	7·9	7·8	7·7	7·9
Empire ...	8·7	7·5	7·7	7·7	7·8	7·9	7·9	7·8	7·8
....	8·6	7·6	7·9	7·9	8·0	8·2	8·1	8·0	7·9
....	8·6	8·0	8·2	7·9	7·8	7·6	7·8	7·8	7·9
y	10·3	9·9	10·2	10·2	10·1	...	9·7	...	10·0
....	8·1	7·3	7·2	7·1	7·2	6·9	6·9	7·0	7·1
....	7·3	7·1	7·0	6·7	6·7	6·8	6·7	7·1	6·9
k	7·7	7·8	7·7	7·7	7·8	7·6	7·1	7·0	7·5
....	7·2	6·4	6·7	6·6	6·8	6·7	6·6	...	6·6
....	6·7	6·2	6·4	6·4	6·5	6·6	6·4	...	6·4

means for the series of years prior to 1881 are not for the iod of twenty years for all the countries above mentioned. case of Ireland the ratio is the average from 1864 to 1880; 1861 to 1878; Switzerland, 1868 to 1880; Italy, 1863 to German Empire, 1872 to 1880; Hungary, 1866 to 1880; rway, 1871 to 1880. It must be borne in mind that the re the ratios of *marriages* to population; to ascertain the of *persons* married it is therefore necessary to double the in each case.

Circumstances of Australia induce marriages.

no one of the European countries referred to above is to at extent similar to the Australasian Colonies in its social s, or in the prosperity of the great bulk of its people. The s of the marriage-rate of the United Kingdom to that of lasia is accidental, as the circumstances of the two countries y dissimilar. In the former case there is a large excess of population, due to the emigration of males, while in these s the preponderance is greatly on the side of the males.

Besides this, the social condition of the working-classes, in the least forward of the Australasian Colonies, is much advanced than in the British Islands; the probabilities are there greatly in favour of a higher marriage-rate in these colonies.

Lowest marriage-rate in New Zealand.

The lowest marriage-rate of any of the colonies is found in Zealand, and the highest, taking a series of years, in Queensl The rates since 1876, which will be found hereunder, show the average of the whole colonies has been approximately 7·53

Marriage rate of all colonies.

The colonies whose rates are above the average, are—

Queensland	8·06
New South Wales	8·03
South Australia	8·00
Tasmania	7·55

Those below the average are—

Western Australia	7·18
Victoria	7·01
New Zealand	6·92

Mean Marriage-rates of the Australasian Colonies.

Year.	New South Wales.	Victoria.	South Australia.	Queensland.	Western Australia.	Tasmania.
1876	7·66	6·21	8·54	7·57	7·07	7·13
1877	7·94	6·31	8·67	7·57	6·38	7·79
1878	8·08	6·20	9·47	6·98	6·50	7·98
1879	7·80	5·98	8·77	7·49	7·57	7·23
1880	7·68	6·22	8·66	6·97	7·42	7·38
1881	8·26	6·79	8·00	7·71	6·60	7·30
1882	8·74	7·09	8·55	8·56	7·07	8·03
1883	8·87	7·43	8·33	8·93	6·95	9·01
1884	8·49	7·73	8·13	8·91	7·11	7·81
1885	8·18	7·72	7·65	8·92	7·80	7·97
1886	7·97	7·84	6·24	8·32	7·94	7·27
1887	7·42	7·62	6·40	8·21	7·70	6·71
1888	7·37	8·02	6·66	8·63	7·18	6·60
Mean...	8·03	7·01	8·00	8·06	7·18	7·55

following are the numbers of marriages registered in each olonies during the years 1876 to 1888 :—

Marriages in each Colony of Australasia.

	New South Wales.	Victoria.	South Australia.	Queensland.	Western Australia.	Tasmania.	New Zealand.
	4,630	4,949	1,852	1,394	191	746	3,196
	4,994	5,103	2,002	1,447	176	831	3,114
	5,317	5,092	2,299	1,444	182	866	3,377
	5,391	4,986	2,238	1,604	215	804	3,352
	5,572	5,286	2,291	1,547	214	840	3,182
1	6,284	5,896	2,308	1,703	197	856	3,279
2	6,948	6,309	2 530	2,034	215	969	3,600
3	7,405	6,771	2,539	2,392	217	1,120	3,614
4	7,482	7,218	2,555	2,661	230	1,003	3,802
5	7,618	7,395	2,447	2,842	256	1,054	3,815
6	7,811	7,737	1,976	2,785	297	985	3,489
7	7,590	7,768	1,977	2,914	316	939	3,563
8	7,844	8,530	2,084	3,254	304	952	3,616

Factors influencing marriages

far as these colonies are concerned, the factors influencing arriage-rate are—first, and chiefly, the general prosperity of ommunity ; secondly, the number of marriageable males, and ccupations of the people. Judged by certain standard tests, which will be hereafter described, the prosperity of the people of New South Wales was perhaps greater than that of any o the other colonies during the period over which the comparison extends; hence the high marriage-rate compared with some of the other colonies.

Large number of single men in New South Wales.

The number of single men (bachelors and widowers) of marriageable age was, numerically, larger in New South Wales than in any of the other colonies, but, proportionately to the whole population larger only than in Victoria, Tasmania, and South Australia during the year 1881. Under similar conditions it would, therefore, b natural to suppose that, were it not for the greater material prosperity of New South Wales, the marriage-rates of the remaining colonies would have been higher than in this Colony. Such however, was not the case, for, as mentioned above, the rate f New South Wales is exceeded only by Queensland, over a seri of years.

Marriage prospects of women

Taking 1881, the only year available for comparison of t probabilities of marriage in each colony, it will be seen that t chance of marriage for a single woman was greatest in Queenslan where it was nearly twice that of Victoria, and about one-thir greater than in New South Wales.

Marriage-rate per cent. of Single Women.

Colony.	Marriage per cent.	Colony.	Marriage per cent.
Queensland	9·75	Western Australia	6·55
New South Wales	7·48	Tasmania	5·45
New Zealand	7·39	Victoria	4·94
South Australia	7·10		

Number of persons signing with marks.

The number of persons signing the marriage register with marks has steadily declined for many years past; the proportion of signatures made with marks was, in 1871, 16·96 per cent. of the whole, while in 1888, the percentage had fallen to 3·74, thus owing a satisfactory decrease of illiteracy. The greatest number persons signing with marks was recorded in the country districts the Colony, where, in 1871, 18·92 per cent. of the total signares were so made, as against 13·94 in the city, and 10·98 in the burbs of Sydney. The proportion of persons unable to write still much higher in the country than in the metropolis, though is satisfactory to note the reduction of the percentage from 8·92 in the year mentioned to 4·55 in 1888.

Illiteracy greater in country.

Percentage of Marks to Total Signatures of Persons signing Marriage Registers.

Year.	City.	Suburbs.	Country.	Colony.
1871	13·94	10·98	18·92	16·96
1872	11·47	8·22	15·09	13·62
1873	10·73	8·38	16·53	14·26
1874	10·12	7·93	15·85	11·96
1875	10·67	3·28	14·21	12·26
1876	7·63	3·56	16·71	10·47
1877	8·30	5·85	11·10	9·76
1878	7·16	4·59	9·21	8·10
1879	6·42	4·34	8·85	7·58
1880	6·58	3·97	7·31	6·66
1881	5·41	4·24	8·34	6·94
1882	6·17	3·47	6·00	5·63
1883	5·00	4·00	7·28	6·10
1884	3·60	3·12	6·77	5·23
1885	3·76	2·03	5·99	4·74
1886	3·63	1·90	5·00	3·98
1887	2·85	1·23	4·68	3·50
1888	3·51	1·84	4·55	3·74
Mean.	7·05	4·61	10·13	8·41

The amount of illiteracy, as displayed by inability to write, is reater amongst females than males. This disparity may be due some measure to a difference in education of the two sexes; ut there is reason to believe that timidity and nervousness on e part of the bride is sometimes the cause of her declining to gn. In 1871, the first year shown on the foregoing table, the umber of women unable to sign their names, who were married nounted to nearly one-fifth of the whole, but the proportion fell 3·5 per cent. in 1888.

Illiteracy of women.

The following table gives the percentage of males and fema signing the marriage registers with marks for every year since 18

Year.	Males signing with marks, per cent.	Females signing with marks, per cent.	Year.	Males signing with marks, per cent.	Femal signing marks, cent
1871	14	19	1880	6	7
1872	11	15	1881	5	8
1873	12	15	1882	5	6
1874	10	13	1883	5	6
1875	10	13	1884	4	5
1876	9	11	1885	4	5
1877	8	11	1886	4	4
1878	7	8	1887	3	4
1879	6	8	1888	4	3½

Marriages chiefly by clergy.

The great bulk of the marriages are solemnized by the cle nevertheless, the number of persons married by registrars is fa large, averaging 5·95 per cent. of the whole, during the eighteen years.

Percentage of Marriages by the Clergy and at Registrars' offi

Year.	Marriages by Clergy.	Marriages at Registrars' offices.	Year.	Marriages by Clergy.	Marria Regist offic
1871	94·46	5·54	1882	93·75	6·
1872	95·13	4·87	1883	93·44	6·
1873	95·92	4·08	1884	92·82	7·
1874	95·21	4·79	1885	93·30	6·
1875	94·56	5·44	1886	93·18	6·
1876	94·06	5·94	1887	93·31	6·
1877	93·93	6·07	1888	93·49	6·
1878	94·19	5·81			
1879	94·03	5·97	Average for 18 years ...	94·05	5·
1880	94·29	5·71			
1881	93·76	6·24			

Church of England and Roman Catholic marriages.

As may naturally be expected, the largest number of marri were celebrated by the Church of England, the Roman Cat Church coming next; but the percentage of marriages celebr by each of these Churches falls short of what might have anticipated from their strength as shown by the census. Th noticeably the case with the Roman Catholic Church. adherents of this denomination at the census of 1881 were 2 per cent. of the population, whereas the marriages solemn

Roman Catholic marriages.

g to its rites during the year 1888 were only 17·21 per
the whole marriages. To bring the number of Roman
marriages up to the proper proportion they should increase
60 per cent. It is plain, therefore, that the adherents of
rch either do not marry within their own communion, or
y do not undertake the responsibilities of marriage to the
tent as other members of the community. The latter suppo-
doubtless the correct explanation of the anomaly; for the
ts of the Roman Catholic Church are amongst the poorest
olony, and want of means is, perhaps, the chief cause of
paratively small number of their marriages, though it is
edly true that what are termed "mixed" marriages are
s.

Marriages by Church of England.

isparity between the number of marriages solemnized by
y of the Church of England and what might be expected
numerical strength of the denomination is not so great.
the year 1888 there were celebrated 3,134 marriages accord-
e rites of this Church, being 39·95 per cent. of the total mar-
hile the estimated percentage of its adherents was 45·50.

Proportion of marriages by each denomination.

e at the following table will show that the number of
s celebrated during 1888 by ministers of other denomina-
tably the Presbyterian, Methodist, Congregational, and
far exceeded their apparent due proportions.

Marriages by Clergy in 1888.

Denomination.	No. of Marriages.	Percentage of total Marriages.	Percentage of adherents to total population, census 1881.
f England	3,134	39·95	45·50
tholic	1,350	17·21	27·63
ian	977	12·46	9·16
and Primitive Methodist	1,071	13·65	8·58
ional	534	6·81	1·91
	133	1·70	0·98
	32	0·41	0·44
ominations	102	1·30	5·30
' Offices	511	6·51	
	7,844		

Marriages registered in the Colony, 1876–88.

Denomination.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
Church of England	1,759	1,869	2,098	2,182	2,252	2,487	2,768	2,949	2,893	2,900	2,987	3,056	3,134
Roman Catholic	921	990	1,009	982	1,021	1,171	1,315	1,414	1,448	1,258	1,323	1,221	1,350
Presbyterian	761	854	821	722	768	872	955	950	1,009	1,155	1,147	1,030	977
Wesleyan	487	509	556	605	618	651	704	712	759	739	832	770	815
Primitive Methodist	101	110	94	111	101	146	134	157	165	193	207	227	256
Congregational	232	243	291	331	364	433	516	565	484	532	554	536	534
Baptist	39	70	89	90	93	85	79	101	117	137	120	120	133
Hebrew	14	20	20	22	17	27	22	24	27	27	18	27	32
German Evangelical	19	20	11	13	9	13	14	10	18	26	17	20	28
Christians	4	3	11	7	9	3	5	1	5	2	31	34	35
Other Denominations	18	3	8	4	2	4	2	36	20	49	42	41	39
Registrars' Offices	275	303	309	322	318	392	434	486	537	510	533	508	511
Total	4,630	4,994	5,317	5,391	5,572	6,284	6,948	7,405	7,482	7,618	7,811	7,590	7,844

DIVORCES.

Marriages dissolved.

The Matrimonial Causes Act was assented to on the 3rd of March, 1873. From 1875 to the end of 1888, 273 marriages have been dissolved, the largest number in any year being thirty-two, during 1886. The subjoined table shows the number of decrees for dissolution of marriage granted during the period 1875–88.

Year.	Decrees for dissolution of marriage.	Year.	Decrees for dissolution of marriage.
1875	9	1883	14
1876	19	1884	27
1877	19	1885	23
1878	11	1886	32
1879	10	1887	25
1880	22	1888	28
1881	15		
1882	19	Total.........	273

Marriages of divorced persons.

The number of persons divorced in the Colony who married again cannot be ascertained, but during the fourteen years which ended with 1888, fifty-eight men and sixty women, who had been divorced in New South Wales or elsewhere, were re-married. The largest number in any year was sixteen, which happened in the years 1883 and 1886; in the former year the numbers were eleven males and five females, whilst in the latter there were eight divorced persons of each sex who married again.

Year.	No. of divorced persons re-married.		Year.	No. of divorced persons re-married.	
	Males.	Females.		Males.	Females.
1875	1	....	1883	11	5
1876	2	1	1884	6	6
1877	1	3	1885	9	6
1878	2	3	1886	8	8
1879	4	2	1887	4	11
1880	....	1	1888	7	7
1881	1	5			
1882	2	2	Total......	58	60

BIRTH-RATE PER MARRIAGE.

umber of hildren born a marriage.

The average number of children born to a marriage varies little in these colonies, the average for the period 1876–1888 b 4·71, as shown below.

Colony.	Average number children per marri
New South Wales	4·70
Victoria	4·53
South Australia	4·62
Queensland	4·71
Western Australia	4·83
Tasmania	4·32
New Zealand	5·31
Average of Australasian Colonies	4·71

ildren per arriage in nited ingdom.

The proportion of children shown above is somewhat hi than in the United Kingdom, though hardly so high as might been expected, considering the circumstances of these colo The average number of children to a marriage in the U Kingdom is :—

England and Wales	4·30
Ireland	5·40
Scotland	4·51

The figures for Ireland are exceptionally high, which is s what surprising, as the average age of persons marrying the much higher than in Australia. The lowest number of chil born to a marriage in any of the important European countri in France, where the average is only 3·05.

BIRTHS.

mean annual birth-rate of this Colony is higher than any of her Australasian Colonies, as will be seen from the following —

Mean annual birth-rate.

Australasia.—Birth-rates per 1,000 of Population.

New South Wales.	Victoria.	South Australia.	Queensland.	Western Australia.	Tasmania.	New Zealand.
38·55	33·61	37·94	37·48	33·98	30·11	41·73
37·92	32·17	37·41	36·75	33·07	30·21	41·28
38·50	32·36	38·22	35·75	31·11	32·27	41·96
38·99	32·18	38·81	36·74	34·38	32·05	40·32
38·81	30·75	38·81	36·92	32·35	32·91	40·78
38·13	31·24	37·11	37·19	33·67	33·40	37·95
37·37	30·05	36·64	35·85	35·84	33·50	37·32
37·49	30·23	36·65	36·92	33·87	34·25	36·28
38·54	30·89	37·69	35·75	33·84	35·66	35·91
37·64	31·27	37·70	36·65	35·21	35·08	34·35
37·03	31·23	35·32	37·58	39·31	34·14	33·15
36·42	32·40	35·07	38·09	37·94	33·87	31·71
36·20	32·44	33·60	37·77	35·87	33·10	31·22
37·81	31·60	37·00	36·88	34·65	33·12	37·23

further comparison the mean annual birth-rates for ten 1878 to 1887) are given for several European countries; which the high rate of New South Wales is still more nt. The information in this table is taken from the report Registrar-General of England.

Births per 1,000 of Population.

United Kingdom	32·15
England and Wales	33·50
Scotland	33·16
Ireland	24·12
France	24·56
Spain	36·64
Switzerland	29·35
Italy	37·09
Germany	37·44
Prussia	37·74
Austria	38·63
Hungary	44·50
Holland	35·04
Belgium	30·66
Denmark	32·26
Norway	31·06
Sweden	29·76

Increase of births.

The births in New South Wales have increased year by year since 1865, and now exceed those of any other colony. The superiority in regard to the number of births rested with Victoria until the year 1879, when the births in this Colony exceeded those of its southern neighbour by 94. Since that year the excess has gradually grown larger, till, during the year 1888, the births registered in New South Wales were more numerous than those registered in Victoria by 4,022.

Number of births in each colony of Australasia.

The number of births registered in each of the colonies for the period 1876–88 is shown in the following table:—

Year.	New South Wales.	Victoria.	South Australia.	Queensland.	Western Australia.	Tasmania.	New Zealand.
1876	23,298	26,769	8,224	6,903	918	3,149	16,168
1877	23,851	26,010	8,640	7,169	912	3,211	16,856
1878	25,328	26,581	9,282	7,397	871	3,502	17,770
1879	26,933	26,839	9,902	7,870	977	3,564	18,070
1880	28,162	26,148	10,262	8,196	933	3,739	19,341
1881	28,993	27,145	10,708	8,220	1,005	3,918	18,732
1882	29,702	26,747	10,844	8,518	1,089	4,043	19,009
1883	31,281	27,541	11,173	9,890	1,058	4,259	19,202
1884	33,946	28,850	11,847	10,679	1,094	4,578	19,846
1885	35,043	29,975	12,046	11,672	1,200	4,637	19,693
1886	36,284	30,824	11,177	12,582	1,466	4,627	19,299
1887	37,236	33,043	10,831	13,513	1,557	4,736	19,135
1888	38,525	34,503	10,510	14,247	1,518	4,777	18,902

Sex of children born.

In no year, as far as observation extends, has the number of females born exceeded the males. The numbers of each sex born in New South Wales since 1871 are given below.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1871	10,326	9,817	20,143	1880	14,424	13,738	28,162
1872	10,276	9,974	20,250	1881	14,891	14,102	28,993
1873	10,952	10,492	21,444	1882	15,087	14,615	29,702
1874	11,323	10,855	22,178	1883	16,014	15,267	31,281
1875	11,380	11,148	22,528	1884	17,417	16,529	33,946
1876	11,791	11,507	23,298	1885	17,939	17,104	35,043
1877	12,292	11,559	23,851	1886	18,700	17,584	36,284
1878	13,082	12,246	25,328	1887	18,901	18,335	37,236
1879	13,840	13,093	26,933	1888	19,616	18,909	38,525

Births of males
ed females.

The excess of males born over females during the past eighteen years has varied from 2·08 per cent. in 1875 to 6·83 in 1878, the verage being 4·58 per cent. The following table shows the pro-ortion of males born to every 100 females :—

Year.	Males born to every 100 females.	Year.	Males born to every 100 females.
1871	105·18	1880	105·00
1872	103·03	1881	105·59
1873	104·38	1882	103·23
1874	104·31	1883	104·89
1875	102·08	1884	105·37
1876	102·47	1885	104·88
1877	106·34	1886	106·35
1878	106·83	1887	103·09
1879	105·71	1888	103·74

Births most numerous in spring.

Births are more numerous in spring than in any other portion of the year, and are fewest in the March quarter. This is found to be the case in the other colonies of Australasia as well as in New South Wales. The following table gives the number of births in each quarter of the year since 1877 :—

Year.	31 March.	30 June.	30 September.	31 December.
1877	5,620	5,837	6,421	5,973
1878	5,962	6,165	6,976	6,225
1879	6,231	6,591	7,264	6,847
1880	6,590	7,116	7,230	7,226
1881	6,976	6,983	7,514	7,520
1882	7,195	7,273	7,827	7,407
1883	7,378	7,755	8,000	8,148
1884	8,141	8,443	9,160	8,202
1885	8,178	8,508	9,656	8,701
1886	8,451	8,976	9,592	9,265
1887	9,075	9,183	9,890	9,088
1888	9,058	9,651	10,162	9,654

Birth-rate per thousand.

Separating the Colony into the divisions of city of Sydney, suburbs, and country districts, it will be seen from the following table that the birth-rate per thousand is much higher in the suburbs than in the other divisions. The highest rate reached for the whole Colony was 39·63, in 1871, which was also the year of the greatest birth-rate in the city. The estimated maximum rate for the suburbs was reached in 1884, when the births were 48·29 per thousand of the population. In the country districts the greatest number of births in proportion to the population occurred in 1874, when the rate was 39·72 per thousand.

Annual birth-rate.

Annual Birth-rate of New South Wales.

Year.	Births per thousand of the population.			
	Colony.	City of Sydney.	Suburbs.	Country.
1871	39·63	38·91	42·62	39·29
1872	38·46	36·63	37·69	38·96
1873	39·38	38·09	40·55	39·44
1874	39·29	37·81	38·57	39·72
1875	38·53	37·44	37·92	38·86
1876	38·55	38·37	37·73	38·74
1877	37·92	38·13	37·18	38·02
1878	38·50	37·62	38·67	38·65
1879	38·99	38·48	39·84	38·92
1880	38·81	37·17	40·61	38·73
1881	38·13	35·84	41·92	37·71
1882	37·37	34·65	44·04	36·30
1883	37·49	33·24	44·90	36·46
1884	38·54	34·80	48·29	36·68
1885	37·64	31·81	46·63	36·21
1886	37·03	31·01	46·29	35·32
1887	36·42	30·19	44·34	35·03
1888	36·20	29·70	42·84	35·17
Mean ...	38·16	35·55	41·70	37·68

Excess of births over deaths.

The excess of births over deaths has not shown a steady increase year by year, but has fluctuated somewhat, as will be seen from the succeeding table. In the whole Colony, during the eighteen years from 1871 to 1888, the least excess was 11,757 in 1875, the highest being 24,117 in the year 1888. In the city of Sydney the least excess was in 1875, viz., 489; the highest in 1887, when the number reached 1,835. The suburbs show a more progressive uniformity than the city. The least excess of births over deaths also occurred in 1875, when it was 1,261; the greatest excess was 6,039, being, as in the case of the city, in the year 1887. In the country districts the number ranged from 9,913, in 1876, to 16,668, in 1888.

xcess of Births over Deaths in New South Wales.

	Colony.	City.	Suburbs.	Country.
	13,736	1,397	1,718	10,621
	12,782	1,069	1,521	10,192
	13,833	1,265	1,766	10,802
	13,526	1,044	1,588	10,894
	11,757	489	1,261	10,007
	12,105	819	1,373	9,913
	13,982	1,399	1,925	10,658
	14,565	1,163	2,023	11,379
	16,733	1,448	2,499	12,786
	16,931	995	2,439	13,497
	17,457	1,495	3,065	12,897
	16,886	1,229	3,379	12,278
	19,032	1,523	3,819	13,690
	19,726	1,594	4,352	13,780
	19,761	1,250	4,523	13,988
	21,697	1,610	5,250	14,837
	23,788	1,835	6,039	15,914
	24,117	1,599	5,850	16,668

Net annual increase.

et annual increase to the population by reason of the births over deaths amounts to 2·28 per cent. for a period g over eighteen years. The rates of increase to popu- rom excess of births over deaths in the Australasian are :—

Colony.	Increase per cent.
and	2·98
stralia	2·43
h Wales	2·28
d	2·15
Australia	1·71
	1·69
	1·61

Excess in favour of females.

thstanding that the number of males born is considerably an that of females, the actual increase of population from s of births over deaths is, owing to the greater mortality male children, greatly in favour of the females. During een years which closed with 1888, the number of females the community by excess of births exceeded the males 0, or 17·17 per cent.

ILLEGITIMACY.

Illegitimac
increasing

The number of illegitimate births in the city, subur
country districts, will be found in the following table.
the whole period over which the tables extend, it will be s
the percentage has increased throughout the Colony, notab
city and suburbs of Sydney, the increase in the country
being very slight, as shown in the table of percentages
389. As regards the city proper the increase in illegiti
been startling.

Number of Illegitimate Births.

Year.	City.	Suburbs.	Country.
1871	206	61	515
1872	182	66	568
1873	199	86	604
1874	241	88	606
1875	260	85	602
1876	306	88	556
1877	305	77	607
1878	317	108	596
1879	389	117	709
1880	411	150	665
1881	425	167	671
1882	440	161	660
1883	439	237	642
1884	527	259	709
1885	529	316	767
1886	533	372	782
1887	496	377	838
1888	567	482	909

Illegitimacy in Sydney.

Dividing the years 1871 to 1888 into quinquennial per
average number of children born out of wedlock, compa
the total births, and with the legitimate children bor
each period, was for the city of Sydney:—

Quinquennial Period.	Per cent. of total births.	Per c legitima
1871–75	7·13	7
1876–80	9·75	10
1881–85	12·23	13
1886–88	14·03	16

Illegitimate births.

The bare statement of these figures is a serious reflection upon the morals of the community. That during the past five years one child in every eight should have been born with the brand of illegitimacy is a startling revelation with regard to social morality. It is also a matter of State concern, as a very large percentage of these unfortunate children become a burden to the country from their birth, and it is from such that the pauper population of the Colony is largely recruited. Happily, as regards the city, the case is not so bad as it appears from the table. Not a few of the women whose children are born out of wedlock in the city really belong to the suburbs or country districts, but to what extent does not appear; possibly the smaller proportion of illegitimate births noticeable in the country districts is due to the fact that women who have fallen come to Sydney to hide their shame. The records of accouchements at the Benevolent Asylum certainly give colour to this supposition, for out of the large number of unmarried women whose confinements took place in that institution it is only reasonable to suppose that the suburbs and country contributed a large quota.

Cause of excess of illegitimacy in the city.

Accouchements in the Benevolent Asylum, Sydney.

Year.	No. of Confinements.	Married.	Unmarried	Year.	No. of Confinements.	Married.	Unmarried
1865	129	50	79	1877	169	41	128
1866	129	51	78	1878	160	38	122
1867	121	44	77	1879	203	45	158
1868	102	46	56	1880	233	51	182
1869	112	40	72	1881	225	50	175
1870	95	29	66	1882	237	45	192
1871	117	54	63	1883	210	33	177
1872	102	37	65	1884	305	84	221
1873	107	27	80	1885	262	55	207
1874	126	36	90	1886	300	71	229
1875	113	30	83	1887	257	76	181
1876	156	38	118	1888	281	70	211

Illegitimacy in the city and suburbs.

Taking the city and suburbs of Sydney together, the rates of illegitimacy during the five-year periods since 1871, are :—

Quinquennial Period.	Per cent. of total births.	Per cent. of Legitimate births.
1871–75	5·11	5·41
1876–80	6·21	6·65
1881–85	6·60	7·07
1886–88	7·02	7·55

The rates are much more favourable than those of the city taken separately, and perhaps represent the true state of affairs as regards illegitimacy more accurately than the table already given.

Dividing the illegitimate births of the whole Colony into the same periods as given for the city, their proportions, as compared with the total births, and with legitimate births, are :—

Quinquennial Period.	Per cent. of total births.	Per cent. of Legitimate births.
1871–75	4·09	4·27
1876–80	4·22	4·42
1881–85	4·36	4·57
1886–88	4·78	5·02

Colony compares favourably with other countries.

Taken as a whole, the Colony compares favourably with most other countries, though its rate as computed from 1876 is higher than that of any other of the Colonies, with the exception of Victoria.

Percentage of Illegitimate Births to Total Births in the Australasian Colonies and United Kingdom.

Country.	Illegitimate births per cent.	Country.	Illegitimate births per cent.
New South Wales	4·40	New Zealand	2·71
Victoria	4·50	England	4·83
Queensland	3·96	Ireland	2·50
South Australia	2·24	Scotland	8·35
Tasmania	4·15		

In the case of South Australia the above is the average rate from 1881, and of Tasmania from 1882. In Western Australi the rates were 4·36 in 1886, and 4·11 in 1887.

Illegitimacy in Foreign States.

The following figures, taken from Mulhall's Dictionary of tatistics, show the percentage of illegitimate births in various ountries :—

Percentage of Illegitimate Births.

enmark	11·2	Spain	5·5
weden	10·2	Portugal	5·5
orway	8·5	Canada	5·0
ermany	8·4	Switzerland	4·6
rance	7·2	Holland	3·5
elgium	7·0	Russia	3·1
nited States	7·0	Greece	1·6
taly	6·8		

The rate of illegitimate births in Austria was 12·9 per cent., a atio much larger than that of any country included in the above able, the excessive number of children born out of wedlock being ccasioned by the extraordinary laws formerly enforced by the overnment of the Austrian Empire, regulating the age before hich a man was incapable of contracting a legal marriage.

The rates for all these colonies are smaller than those of England and Scotland, but illegitimacy is increasing here, while it is decreasing in the United Kingdom.

Percentage of illegitimacy to total births.

Illegitimate Births—Percentage to Total Births in New South Wales.

Year.	City.	Suburbs.	Country.	Colony.
1871	6·91	2·34	3·53	3·88
1872	6·32	2·70	3·80	4·02
1873	6·49	3·11	3·86	4·14
1874	7·72	3·15	3·72	4·21
1875	8·22	2·92	3·65	4·20
1876	9·24	2·87	3·28	4·07
1877	8·97	2·37	3·52	4·14
1878	9·09	2·93	3·28	4·03
1879	10·47	2·82	3·72	4·51
1880	11·00	3·25	3·36	4·35
1881	11·36	3·23	3·34	4·36
1882	11·72	2·74	3·28	4·24
1883	11·68	3·62	3·05	4·21
1884	12·76	3·34	3·21	4·40
1885	13·61	3·77	3·37	4·60
1886	13·90	4·00	3·38	4·65
1887	13·13	3·91	3·52	4·59
1888	15·07	4·85	3·66	5·08

TWINS AND TRIPLETS.

Triplets and Twins.

During the year 1888 there was one case of triplets, which occurred at Tumut, and one case of four at a birth, at St. Peter's, Cook's River, a suburb of Sydney. Twins numbered 363 cases, comprising 371 males and 355 females, in all 726 children. The number of children born as quartettes, triplets, and twins forms 1·9 per cent. of the total births, a larger proportion than in any previous year.

District.	Triplets and Quartettes.				Twins.			
	No. of cases.	M.	F.	Total.	No. of cases.	M.	F.	Total.
Sydney...	......	......	.....	......	45	50	40	90
Suburbs..	1	1	3	4	102	110	94	204
Country..	1	1	2	3	216	211	221	432
	2	2	5	7	363	371	355	726

Twins and Triplets born in New South Wales.

Year.	Triplets.				Twins.			
	No. of cases.	M.	F.	Total.	No. of cases.	M.	F.	Total.
1878	2	3	1	4†	196	195	197	392
1879	2	1	5	6	203	206	198	404†
1880	......	......	......	......	224	230	218	448
1881	4	8	4	12	224	219	227	446†
1882	......	......	......	......	213	217	208	425*
1883	2	3	3	6	287	277	297	574
1884	4	6	6	12	288	277	295	572‡
1885	2	5	1	6	306	305	307	612
1886	1	......	3	3	330	284	373	657§
1887	1	3	......	3	310	294	325	619*
1888	1	1	2	3	363	371	355	726
	19	30	25	55	2,944	2,875	3,000	5,875

* One still-born. † Two still-born. § Three still-born. ‡ Four still-born.

The only instance of more than three children at a birth during the years 1878 to 1888 was the case above mentioned; the previous quadruplicate birth occurred in 1877.

Twins and triplets born.

As stated in the foregoing table there were 2,944 cases of twins and 19 cases of triplets during the eleven years 1878–88. The total number of confinements recorded in this period was 348,463. It follows, therefore, that one mother in every 118 gave birth to twins, and one mother in every 18,340 was delivered of three children at a birth.

DEATHS.

The number of deaths occurring in the Colony during the last eighteen years averages annually 16·46 for males, and 13·91 for females, per thousand persons, or 15·30 for the whole population. Compared with the death-rates of other countries, especially those of the Old World, this rate is remarkably low. Yet, as will presently appear, it is higher than might be anticipated from the peculiarly healthy climatic conditions which pertain to New South Wales.

Mean death-rate.

The mean death-rate of the Australasian Colonies from 1876 to 1888 varies from 11·07 per thousand, in New Zealand, to 17·33, in Queensland, and averages 15·01, which is a little lower than the rate of Victoria. Five colonies are over the mean rate:—New South Wales with 15·45; Queensland, 17·33; Western Australia, 16·27; Tasmania, 15·79; and Victoria, 15·07 per thousand, while only two are lower:—South Australia, 14·12; and New Zealand, 11·07 per thousand.

Mean Death-rate of the Australasian Colonies.

Year.	New South Wales.	Victoria.	South Australia.	Queensland.	Western Australia.	Tasmania.	New Zealand.
1876	18·52	17·02	16·38	18·82	14·18	16·54	12·66
1877	15·69	15·80	14·00	17·29	15·70	19·17	11·47
1878	16·36	15·46	15·44	20·41	14·07	15·66	10·96
1879	14·77	14·53	14·04	14·97	14·46	15·18	12·46
1880	15·48	13·70	14·79	13·59	13·24	16·12	11·46
1881	15·17	14·16	13·90	15·02	13·80	14·77	11·13
1882	16·12	15·32	14·84	17·99	14·16	15·79	11·19
1883	14·68	14·28	14·55	18·82	17·93	17·06	11·45
1884	16·14	14·46	15·24	22·97	21·87	15·50	10·39
1885	16·41	14·98	12·28	19·58	17·60	15·40	10·61
1886	14·88	15·15	13·38	16·65	21·56	14·58	10·54
1887	13·15	15·69	12·77	14·56	17·11	15·45	10·17
1888	13·54	15·31	12·02	14·66	15·90	14·11	9·43
Mean.. ...	15·45	15·07	14·12	17·33	16·27	15·79	11·07

Deaths in each Colony of Australasia.

The numbers of deaths registered in each of the Colonies during the years 1876 to 1888 are here given :—

Deaths in each Colony of Australasia.

Year.	New South Wales.	Victoria.	South Australia.	Queensland.	Western Australia	Tasmania.	New Zealand.
1876	11,193	13,561	3,550	3,467	383	1,733	4,904
1877	9,869	12,776	3,235	3,373	433	2,040	4,685
1878	10,763	12,702	3,749	4,220	394	1,700	4,645
1879	10,200	12,120	3,580	3,207	411	1,688	5,583
1880	11,231	11,652	3,912	3,017	382	1,832	5,437
1881	11,536	12,302	4,012	3,320	412	1,733	5,491
1882	12,816	13,634	4,393	4,274	430	1,906	5,701
1883	12,249	13,006	4,435	5,041	560	2,122	6,061
1884	14,220	13,505	4,788	6,861	707	1,990	5,740
1885	15,282	14,364	3,970	6,235	600	2,036	6,081
1886	15,587	14,952	4,234	5,575	806	1,976	6,135
1887	13,448	16,005	3,944	5,166	702	2,161	6,137
1888	14,408	16,287	3,759	5,529	673	2,036	5,708

Death-rate of males and females compared.

The death-rate of males averages in this Colony 16·46 per thousand, or more than one-sixth higher than that of females. The deaths of both sexes will be seen below.

Deaths, and Death-rate of New South Wales.

Year.	Males.	Females.	Total.	Death Rate per 1,000 of mean populati		
				Males.	Females.	Total.
1871	3,882	2,525	6,407	13·98	10·95	12·60
1872	4,442	3,026	7,468	15·45	12·66	14·18
1873	4,599	3,012	7,611	15·50	12·15	13·98
1874	5,022	3,630	8,652	16·35	14·11	15·33
1875	6,245	4,526	10,771	19·64	16·97	18·42
1876	6,508	4,685	11,193	19·82	16·98	18·52
1877	5,877	3,992	9,869	17·19	13·91	15·69
1878	6,284	4,479	10,763	17·55	14·94	16·36
1879	6,082	4,118	10,200	16·16	13·10	14·77
1880	6,638	4,593	11,231	16·76	13·94	15·48
1881	6,753	4,783	11,536	16·23	13·90	15·17
1882	7,596	5,220	12,816	17·46	14·51	16·12
1883	7,116	5,133	12,249	15·58	13·59	14 68
1884	8,325	5,895	14,220	17·24	14·81	16·14
1885	8,900	6,382	15,282	17·40	15·22	16·41
1886	8,501	6,086	14,587	15·76	13·82	14·88
1887	7,776	5,672	13,448	13·82	12·34	13·15
1888	8,453	5,955	14,408	14·41	12·46	13·54
Mean.............................				16·46	13·91	15·30

Greater mortality amongst males.

he principal cause of the greater mortality amongst males is nd in the nature of their occupations, with the accidents and osure attendant thereon. This is especially marked in the ntry districts of the Colony, where deaths from accident are remely numerous, especially among males. Besides this, the ater delicateness of male infants operates to increase the death- as compared with that of females. It has been shown elsere that the natural increment to the population by births is in proportion of 104·58 males to 100 females ; but, from the ses alluded to, the net increase of population by excess of ths over deaths is largely in favour of females. For the five rs, 1884–8, this excess averaged 15·51 per cent. annually.

Comparison of male with emale deaths.

Male births in excess.

The excess of males in the community, with the consequent ger number of male deaths, makes the comparison appear more ourable to female lives than is actually the case. The following le has been computed on the assumption that the males and nales in the community are equal in number, as they soon uld be if it were not for the excess of males yearly added to the pulation by immigration. It would appear, however, from the ble, that the extra proportion of males born by no means unterbalances the extra number of male deaths.

Male and Female Deaths.

Year.	Male deaths.	Female deaths.	Computed male deaths, if male and female population were equal.	Excess of computed male over female deaths.	Excess of male over female births.
1876	6,508	4,685	5,470	785	284
1877	5,877	3,992	4,933	941	733
1878	6,284	4,479	5,263	784	836
1879	6,082	4,118	5,081	963	747
1880	6,638	4,593	5,523	930	686
1881	6,753	4,783	5,585	802	789
1882	7,596	5,220	6,278	1,058	472
1883	7,116	5,133	5,884	751	747
1884	8,325	5,895	6,863	968	888
1885	8,900	6,382	7,296	914	835
1886	8,501	6,086	6,941	855	1,116
1887	7,776	5,672	6,354	682	566
1888	8,453	5,955	6,885	930	707
Total for thirteen years..................				11,363	9,406

Deaths most numerous in March quarter.

The season of the year in which deaths are most numerous the quarter ending March, but the number of deaths in December quarter is nearly as great, and for some years exceeded that of the first quarter. The deaths for 1888 show considerable increase on those of 1887; but apart from this which was a most favourable one, the death-rate of 1888 lower than that of any other year since 1871. Taking the last years the deaths during each quarter of the year were:—

Deaths during each Quarter of the Year.

Year.	31 March.	30 June.	30 September.	31 Decem
1879	2,857	2,563	2,232	2,548
1880	2,677	2,621	2,571	3,302
1881	3,169	2,825	2,606	2,934
1882	3,455	3,290	2,911	3,130
1883	3,125	3,061	2,790	3,253
1884	3,699	3,672	3,136	3,793
1885	3,924	3,730	3,566	4,022
1886	3,718	3,730	3,320	3,829
1887	3,980	3,362	2,905	3,301
1888	3,624	3,545	3,387	3,302

Favourable death-rate of Colony.

It has been already pointed out that in regard to its death-rate the Colony compares very favourably with the other countries of the world. Taking over a long series of years, the average death per thousand of mean population in the United Kingdom and several of the leading European countries are:—

United Kingdom	[illegible]	Hungary ...	[illegible]
England and Wales ..	[illegible]	Holland ...	[illegible]
Scotland	[illegible]	Belgium . .	[illegible]
Ireland	[illegible]	Denmark	[illegible]
France	[illegible]	Norway	[illegible]
Spain	[illegible]	Sweden	[illegible]
Switzerland	[illegible]		
Italy	[illegible]	Average . ..	[illegible]
Germany	[illegible]		
Prussia	[illegible]	New South Wales.	[illegible]
Austria .	[illegible]		

[illegible]

[illegible]

lonies. Chief amongst these are the scourges of small-pox and olera. It is not, therefore, surprising that even the healthiest untry of Europe should have a higher annual death-rate than any lony of Australasia. Considering the favourable environments the population in New South Wales, the matter for surprise is t that the difference is so great but that it is not greater. Apart om climatic conditions, which are most favourable here, the cial condition of the great body of the people is far superior, d their occupations more healthful than in Europe; and were not for the pitiable loss of infant life, the death-rate of this olony would not reach much more than half the European verage.

Mortality in the Colony and its subdivisions.

For the purpose of comparison, the obvious divisions of city, burbs, and country districts suggest themselves, and the annual ath-rate of each subdivision of the Colony for the years 1871–88 given in the subjoined table.

Deaths in New South Wales, per Thousand of Population.

Year.	Colony.	City of Sydney.	Suburbs.	Country.
1871	12·60	20·67	14·46	10·63
1872	14·18	23·03	14·15	12·37
1873	13·98	22·37	14·63	12·15
1874	15·33	25·16	16·59	13·12
1875	18·42	31·65	21·47	15·23
1876	18·52	28·87	20·79	16·05
1877	15·69	22·43	15·13	14·47
1878	16·36	25·06	17·37	14·44
1879	14·77	23·47	15·83	12·83
1880	15·48	27·26	19·17	12·34
1881	15·17	21·52	17·07	13·49
1882	16·12	23·30	18·71	14·09
1883	14·68	19·76	18·65	12·68
1884	16·14	21·37	21·15	13·78
1885	16·41	21·58	21·46	13·97
1886	14·88	17·99	20·15	12·69
1887	13·15	15·52	16·57	11·62
1888	13·54	17·08	17·64	11·55
Mean	15·30	22·67	17·83	13·19

Variations in death rates.

The death-rate for the whole Colony varied from 12·60 to 18·52, a range of 5·92 per thousand. In the city, however, the rate varied between 15·52 and 31·65, the range being 16·13 per thousand; in the suburbs the lowest rate was 14·15, and the highest touched 21·47, giving a range of 7·32 per thousand. In the country districts 10·63 was the lowest rate in the eighteen years, and 16·05 the highest, 5·42 being the range.

Maximum, Minimum, and Mean Death-rate.

Districts.	Per 1,000 of mean population.		
	Maximum.	Minimum.	Mean.
Colony	18·52	12·60	15·30
City	31·65	15·52	22·67
Suburbs	21·47	14·15	17·83
Country	16·05	10·63	13·19

Death-rate of persons over 5 years.

Taking the deaths of persons over 5 years of age, the rates for the metropolitan district and the country are not only more favourable but more equal.

Death-rates of Persons over Five Years of Age.

Districts.	Per 1,000 of mean population.		
	Maximum.	Minimum.	Mean.
Colony	12·78	8·70	10·26
City	19·70	10·67	15·08
Suburbs	11·46	7·64	9·51
Country	11·71	7·97	9·43

Infant mortality [illegible]

The city maximum rate was in 1876, and is the disturbing element in the whole series, otherwise the death-rates are particularly favourable for these ages. Turning to deaths under 5 years, which may be generally termed the ages of infantile life, the chief factor of the excessive death-rate of the city and suburbs will be found.

Death-rates of Children under Five Years of Age.

Districts.	Per 1,000 of mean population.		
	Maximum.	Minimum.	Mean.
y	53·64	32·56	43·73
....	105·64	50·50	71·47
rbs	86·99	46·02	68·12
try	40·37	24·00	33·86

ie lesson conveyed by the above table is a very striking one. minimum death-rate of infants in the suburbs exceeded the imum rate of the country by about 14 per cent., and the mum of the city exceeded the country maximum by over 25 cent. The mean rate of the country was not half that of the rbs, and only about 47 per cent. of the city rate.

Natural salubrity of the Colony.

Then the circumstances of life in the country districts are idered, the distance sick persons are removed from the com-, and even the necessaries, which sickness demands, the full ning of the low rate, both for adults and children, will best be erstood. No more potent argument could be advanced as to natural salubrity of the Colony than the statement of the th-rates, as recorded outside the walls of the metropolis.

Death-rate of children lowest in the country.

ll satisfaction, however, in regard to the low death-rate is fined to the country districts. As far as Sydney and its urbs are concerned, there is no cause for congratulation; on contrary, the rate at which children of tender years drop into grave forms a pathetic commentary on the civilization of the ony. Taking the whole period embraced in the table, the th-rates of children under 5 years were 71 per thousand in the city and 68 per thousand in the suburbs. Eighteen years ago the suburbs could boast a death-rate of one-third less than the city; now it is higher. The following quinquennial table has been compiled in order to illustrate the gradual change which has occurred since 1871 :—

Comparison of quinquennial periods.

Death-rate of New South Wales in Quinquennial Periods per thousand of population.

Quinquennial records.	Colony.	City.	Suburbs.	Country.
		All ages.		
1871-75	14·90	24·58	16·26	12·70
1876-80	16·16	25·42	17·66	14·02
1881-85	15·70	21·41	19·48	13·60
1886–88	13·86	16·86	18·12	11·95
		Over 5 years.		
1871-75	10·16	15·86	8·77	9·29
1876-80	10·77	16·85	9·02	9·89
1881-85	10·46	14·81	10·31	9·61
1886–88	9·26	11·31	10·20	8·57
		Under 5 years.		
1871-75	39·54	75·33	56·01	30·37
1876-80	46·41	80·14	74·06	36·32
1881-85	46·50	67·69	76·63	35·96
1886–88	41·66	56·89	64·19	32·06

Improvement in city rate.

A remarkable improvement may be noticed in the death-rate of the city, both for ages over and under 5 years. In the country, during the second quinquennial period, the rate showed an increase, particularly amongst infant lives; but the third period is marked by a slight recovery, which is quite eclipsed by the striking decline in the death-rates of 1886–88. As regards the suburbs the signs are not so assuring, for although a considerable improvement is manifest in 1886–88, the previous five years are much higher than in the two preceding quinquennial periods; and during the last three years the death-rates of persons under five years were considerably higher than in the city or the untry. The following tables show the mortality in the city id suburbs of Sydney and in the country districts from 71 to 1888. In the first will be found the actual number of aths, and in the second the proportion of children under five ars, and of persons over that age, who died, as compared with e whole population :—

Deaths of persons under and over 5 years.

Deaths in New South Wales, 1871–88.

Year.	Children under 5 years.				Persons over 5 years.			
	Colony.	City.	Suburbs.	Country.	Colony.	City.	Suburbs.	Country.
1871	2,705	743	487	1,475	3,702	840	396	2,466
1872	3,203	815	503	1,885	4,265	995	412	2,858
1873	2,924	719	510	1,695	4,687	1,081	487	3,119
1874	3,768	929	672	2,167	4,884	1,148	527	3,209
1875	4,958	1,264	913	2,781	5,813	1,409	734	3,670
1876	4,671	1,024	917	2,730	6,522	1,467	768	4,287
1877	4,293	815	723	2,755	5,576	1,185	598	3,793
1878	4,884	1,022	920	2,942	5,879	1,299	731	3,849
1879	4,369	899	902	2,568	5,831	1,367	746	3,718
1880	4,910	1,293	1,276	2,341	6,321	1,447	904	3,970
1881	4,889	848	1,147	2,894	6,647	1,398	959	4,290
1882	5,452	990	1,355	3,107	7,364	1,535	1,142	4,687
1883	5,304	940	1,455	2,909	6,945	1,293	1,260	4,392
1884	6,228	1,053	1,838	3,337	7,992	1,482	1,553	4,957
1885	6,612	1,043	2,091	3,478	8,670	1,593	1,766	5,311
1886	6,294	919	2,150	3,225	8,293	1,305	1,895	5,093
1887	5,620	770	1,828	3,022	7,828	1.172	1,776	4,880
1888	6,207	913	2,122	3,172	8,201	1,250	1,973	4,978

th-rate of
sons under
over 5 years.

Death-rate in New South Wales under and over Five Ye of age per Thousand of Mean Population.

Year.	Children under 5 years.				Persons over 5 years.		
	Colony.	City.	Suburbs.	Country.	Colony.	City.	Suburbs.
1871	32·56	65·35	47·57	24·00	8·70	12·87	7·79
1872	37·16	69·26	46·95	29·58	9·68	14·89	7·64
1873	32·97	59·91	46·02	25·84	10·28	15·79	8·53
1874	41·37	76·51	59·18	32·07	10·31	16·30	8·65
1875	53·64	105·64	80·35	40·37	11·81	19·43	11·23
1876	49·66	86·55	80·71	38·52	12·78	19·70	11·02
1877	44·41	67·42	61·56	37·83	10·47	15·38	7·91
1878	49·39	82·08	73·91	39·77	10·51	16·20	8·85
1879	42·75	69·34	67·13	33·88	9·90	16·35	8·22
1880	45·83	95·30	86·99	31·62	10·21	16·61	9·12
1881	43·63	61·79	71·00	35·21	10·25	15·42	8·94
1882	46·61	70·27	74·93	36·66	10·86	16·38	9·90
1883	43·46	65·32	73·48	33·12	9·75	13·11	10·02
1884	48·92	71·49	82·22	36·98	10·60	14·26	11·25
1885	49·86	69·59	81·50	37·84	10·86	14·86	11·46
1886	45·42	60·91	74·92	34·03	9·86	12·02	11·01
1887	38·66	50·50	57·05	30·82	8·92	10·67	9·58
1888	40·92	59·27	60·60	31·33	8·99	11·24	10·01
Mean...	43·73	71·47	68·12	33·86	10·26	15·08	9·51

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The following table gives the number of children under 1 dying in the city, suburbs and country; and the numbe thousand, as compared with the births. This latter approxim represents the proportion of children born who died wit year.

Deaths of Children under One Year of Age.

Year.	Colony.		City.		Suburbs.		Country.	
	Total.	Per 1,000 births.	Total.	Per 1,000 births.	Total.	Per 1,000 births.	Total.	Per 1,000 births.
1871	1,812	89·9	467	156·7	318	122·2	1,027	70·5
1872	2,116	104·4	507	176·1	339	139·1	1,270	85·0
1873	1,985	92·5	487	158·8	341	123·4	1,157	74·0
1874	2,428	109·4	588	188·4	403	144·6	1,437	88·3
1875	2,695	119·6	613	193·8	461	158·5	1,621	98·4
1876	2,629	112·8	561	169·4	521	170·3	1,547	91·3
1877	2,785	116·7	562	165·3	476	146·6	1,747	101·5
1878	3,126	123·4	650	186·5	591	160·8	1,885	103·7
1879	2,886	107·1	612	164·7	594	143·2	1,680	88·0
1880	3,200	113·6	785	210·1	821	177·7	1,594	80·4
1881	3,341	115·2	608	162·5	836	161·6	1,897	94·4
1882	3,897	131·2	737	196·3	1,028	174·9	2,132	106·2
1883	3,590	114·7	668	177·8	1,012	154·8	1,910	90·9
1884	4,285	126·2	769	186·2	1,272	164·2	2,244	101·6
1885	4,596	131·1	780	200·7	1,512	180·4	2,304	101·1
1886	4,635	127·7	702	183·1	1,573	169·2	2,360	101·9
1887	3,945	105·9	573	151·7	1,317	136·6	2,055	86·3
1888	4,271	110·9	640	170·1	1,444	145·2	2,187	88·1
Mean...	......	114·0	......	177·7	......	154·1	......	91·7

Infant mortality greater in towns.

The experience of the United Kingdom shows that infant mortality is always higher in large towns than in the country districts. The experience of this Colony is somewhat similar. But, though the conditions of life in England are more favourable in the country districts than in the towns, the same is not necessarily the case here. In sparsely scattered communities, such as the country districts of this Colony mainly comprise, it is frequently impossible to obtain for children of tender years articles which in towns are considered, and rightly so, almost necessaries of life. Were it not, therefore, for the contagions which seem incidental to towns, the death-rate of children might naturally be expected to be, so far as this Colony is concerned, higher in the country than in the city. That such is not the case is evident from the tables given above. Compared with the other colonies, and England and France, the rates of New South Wales, nevertheless, seem very favourable.

The Colonies compared with England and France.

Death-rates of Children under One Year in the Australasia Colonies, England, and France.

Country.	Deaths of children un 1 year per 1,000 birt
New South Wales	114·01
" " Sydney and suburbs	164·73
" " country districts	91·75
Victoria	122·80
" Melbourne and suburbs	170·44
" country districts	97·46
South Australia	139·71
Queensland	131·51
Western Australia	123·22
New Zealand	96·78
Tasmania	105·00
England	145·59
" London	155·65
France	157·00

Comparison favourable to New South Wales.

The death-rate of infants in the country districts is lighter th that of any country included in the above table ; and, in point health, the Colony, taken as a whole, is surpassed only by T mania and New Zealand.

Colony compares favourably with other countries.

The general salubrity of the Colony may be taken as w established, and if the deaths of Sydney and suburbs, especia amongst young children, were not relatively more numerous t for the rest of the Colony, New South Wales need not fear c parison with any country.

The high death-rates of Sydney certainly do not arise f natural causes. Seated on the hilly shores of Port Jackson, situation is all that could be desired, and the configuration of ground on which it stands is especially adapted to the requ ments of a perfect drainage system. What Nature with la hand has bestowed, is, however, in danger of being destroyed polluted; for looking through the causes of death the conclu is inevitable that no small part of the mortality of Sydney and suburbs arises primarily, or indirectly, from diseases which sanit precautions might avert.

Sydney compares well with other capitals.

With the exception of Hobart and Wellington, there is not uch difference in the mean annual death-rates of the capitals of e Australasian Colonies. The rates for a single year, however, o not present such uniformity, as will be seen by the following gures for 1888—Hobart, 21·5; Melbourne, 20·5; Perth, 20·1; Brisbane, 17·8; Sydney, 17·4; Adelaide, 16·8; and Wellington, 13·1. Of course the suburbs of the various cities are included in these calculations. Compared with cities in other parts of the world the result is generally favourable to Australasia.

Mean Death-rates of the chief Australasian, European, and American cities.

Australasia.

Hobart	24·1	Brisbane	19·5
Melbourne	20·1	Adelaide	19·5
Perth	20·1	Wellington	15·5
Sydney	19·7		

United Kingdom.

Dublin	27·1	Sheffield	21·6
Liverpool	26·7	London	21·1
Cork	26·1	Edinburgh	20·2
Manchester	25·5	Birmingham	19·8
Glasgow	25·3	Portsmouth	19·7
Plymouth	22·3	Bristol	19·6
Newcastle	21·8	Brighton	19·0

Continental Europe.

Madrid	38.3	Berlin	25·6
St. Petersburg	35·2	Paris	24·5
Buda-Pesth	33·1	Amsterdam	24·3
Prague	32·3	Stockholm	23·4
Breslau	31·2	Copenhagen	23·0
Munich	30·7	Venice	22·7
Milan	29·1	Brussels	22·6
Rome	27·3	Rotterdam	22·6
Vienna	26·9	The Hague	22·4
Cologne	26·2	Geneva	21·2
Leipsic	26·1	Christiania	20·6
Hamburg	25·7		

America.

Montreal	27·9	Toronto	21·5
New York	26·2	Baltimore	21·1
Brooklyn	25·6	San Francisco	20·7
Boston	23·5	Philadelphia	20·3
New Orleans	22·7	St. Louis	19·3

This list is fairly representative, and largely as the rate for ydney is swollen by the deaths of children of tender years, whose ives are often needlessly sacrificed, the comparison is satisfactory.

CAUSES OF DEATH.

The system of classifying causes of death proposed by t late Dr. William Farr, F.R.S., in conjunction with Dr. M d'Espine, which was in vogue in the United Kingdom and in t colonies for over a quarter of a century, has within the last f years been abandoned in favour of one arranged by Dr. Willi Ogle, Dr. Farr's successor at the General Register Office, Londo upon the basis of a mode of classification determined upon b joint committee appointed by the Royal College of Physicia London; and whilst this latter includes a few important dev tions from the former, the changes on the whole are in the dir tion of more extensive exemplification, so that the admiral system of Dr. Farr still forms the groundwork of the new classi cation.

from ses. The number of deaths from each cause during the year 1888 a here given; those for the metropolis and the country distri being recorded separately. For purposes of comparison the cau of death as far back as 1881 have been re-arranged in clas according to the new and improved system, and will be found the table immediately following the death-roll for 1888.

Classification of Fatal Diseases in Sydney and Suburbs, an proportion per cent. of Deaths from each cause—1888.

Class.	Causes of Death.	Under 5 Years.		Over 5 Years.		Total.	Prop tion cen
		Male.	Female.	Male.	Female.		
I.	Specific febrile, or zymotic diseases	368	345	154	185	1,052	16·
II.	Parasitic diseases	8	3	5	4	20	0·
III.	Dietetic diseases	19	10	38	22	89	1·
IV.	Constitutional diseases.	109	111	468	385	1,073	17·
V.	Developmental diseases	139	98	58	55	350	5·
VI.	Local diseases	684	606	815	670	2,775	44·
VII.	Violence	24	30	263	73	390	6·
VIII.	Ill-defined and not specified causes	244	237	18	10	509	8·
	All causes	1,595	1,440	1,819	1,404	6,258	100·

METROPOLIS.

Classification of Diseases—Metropolis.

Class I.—Specific Febrile, or Zymotic Diseases.

Order 1. *Miasmatic Diseases.*—Small-pox, 2; measles, 123; scarlet fever, 71; whooping cough, 4; diphtheria, 139; simple and ill-defined fever, 2; typhoid, enteric fever, 182.

Order 2. *Diarrhœal Diseases.*—Cholera, 49; diarrhœa, 352; dysentery, 28.

Zymotic diseases.

Order 3. *Malarial Diseases.*—Ague, 2.

Order 4. *Zoogenous Diseases.*—None.

Order 5.—*Venereal Diseases.*—Syphilis, 46; gonorrhœa, stricture of urethra, 2.

Order 6. *Septic Diseases.*—Phagedæna, 2; erysipelas, 9; pyæmia, septicæmia, 15; puerperal fever, 24.

Class II.—Parasitic Diseases.

Thrush, 10; hydatid disease, 8; worms, &c., 2.

Class III.—Dietetic Diseases.

Starvation, want of breast milk, 29; intemperance—*(a)* chronic alcoholism, 52; *(b)* delirium tremens, 7; surfeit (over-eating), 1.

Class IV.—Constitutional Diseases.

Constitutional diseases.

Rheumatic fever, rheumatism of heart, 17; rheumatism, 26; gout, 11; rickets, 1; cancer, 175; tabes mesenterica, 115; tubercular meningitis (hydrocephalus), 76; phthisis, 561; other forms of tuberculosis, scrofula, &c., 47; purpura, hæmorrhagic diathesis, 15; anæmia, chlorosis, leucocythæmia, 16; diabetes mellitus, 13.

Class V.—Developmental Diseases.

Premature birth, 194; atelectasis, 12; cyanosis, 15; spina bifida, 7; cleft palate, 2; other congenital defects, 7; old age, 113, at ages ranging from 58 to 101 years.

Class VI.—Local Diseases.

Local diseases.

Order 1. *Diseases of the Nervous System.*—Inflammation of the brain or its membranes, 111; apoplexy, 118; softening of the brain, 13; hemiplegia, brain paralysis, 54; paralysis agitans, 1; insanity, general paralysis of the insane, 32; chorea, 4; epilepsy, 38; convulsions, 252; laryngismus stridulus, 1; idiopathic tetanus, 8; paraplegia, diseases of the spinal cord, 30; brain diseases (undefined), 29.

Order 2. *Diseases of the Organs of Special Sense.*—Otitis, otorrhœa, disease of the ear, 4; epistaxis, disease of the nose, 2; ophthalmia, disease of the eye, 1.

Order 3. *Diseases of the Circulatory System.*—Endocarditis, valvular disease, 102; pericarditis, 11; hypertrophy of heart, 5; angina pectoris, 5; syncope, 25; aneurism, 23; senile gangrene, 5; embolism, thrombosis, 4; phlebitis, 3; heart disease (undefined), 185.

Order 4. *Diseases of the Respiratory System.*—Laryngitis, 34; cr
93; other diseases of larynx and trachea, 4; emphysema, asthma,
bronchitis, 233; pneumonia, 225; congestion of the lungs, 48; pleu
17; gangrene of the lung, 1.

Order 5. *Diseases of the Digestive System.*—Stomatitis, 13; dent
127; sore throat, quinsy, 10; dyspepsia, 12; hæmatemesis, 6; mele
diseases of the stomach, 33; enteritis, 299; ulceration of intestine
ileus, obstruction of intestine, 29; stricture or strangulation of inte
5; intussusception, 4; hernia, 15; peritonitis, 40; ascites, 8; cirrh
liver, 44; hepatitis, 21; jaundice, 21; other diseases of liver, 29;
diseases of the digestive system, 7.

Order 6. *Diseases of the Lymphatic System and Ductless Gla*
Diseases of lymphatic system, 1; diseases of spleen, 1; bronchoce
Addison's disease, 1.

Order 7. *Diseases of the Urinary System.*—Acute nephritis, 31; Br
disease, 85; uræmia, 20; suppression of urine, 1; calculus, 6; hæma
1; disease of bladder and prostate, 16; kidney disease (undefined), 2

Order 8. *Diseases of the Organs of Generation.*—Ovarian diseas
diseases of uterus and vagina, 4; disorders of menstruation, 2;
abscess, 2; diseases of testes, penis, scrotum, &c., 2.

Order 9. *Diseases of Parturition.*—Abortion, miscarriage, 6; pue
mania, 4; puerperal convulsions, 8; placenta prævia, floodin
other accidents of childbirth, 16.

Order 10. *Diseases of the Organs of Locomotion.*—Caries, necrosi
arthritis, ostitis, periostitis, 7; curvature of spine, 3.

Order 11. *Diseases of the Integumentary System.*—Carbuncl
phlegmon, cellulitis, 2; lupus, 1; ulcer, bed sores, 1; eczem
pemphigus, 1; psoriasis, 1.

Class VII.—Violence.

Violent deaths.

Order 1. *Accident or Negligence.*—Fractures and contusions,
wounds *(a)* gunshot, 2; *(b)* cuts (tetanus), 7; burns, 29; scal
sunstroke, 7; lightning, 2; poison, 6; drowning, 43; suffocatio
otherwise (blood poisoning, umbilical hæmorrhage, chloroform, &c.),

Order 2. *Homicide.*—Murder, 16; manslaughter, 9.

Order 3. *Suicide.*—Wounds—*(a)* gunshot, 9; *(b)* cut, stab, 13;
19; drowning, 6; hanging, 5; otherwise (fall from cliffs), 2.

Order 4. *Execution.*—Judicial hanging, 1.

Order 5. *Violent Deaths not classed.*—Found drowned, 29; pois
fractures, 5; suffocation, 1 (open verdicts).

Class VIII.—Ill-defined and not Specified Causes.

Dropsy, 11; atrophy, debility, inanition, 476; tumour, 3; absc
hæmorrhage, 1; other ill-defined and not specified causes, 15.

MALES, 3,414; FEMALES, 2,844; TOTAL, 6,258.

Classification of Fatal Diseases, and proportions per cent. of Deaths from each cause in the Country Districts of New South Wales—1888.

Classificati of diseases— Country districts.

Class.	Causes of Death.	Under 5 Years.		Over 5 Years.		Total.	Proportion per cent.
		Male.	Female.	Male.	Female.		
I.	Specific febrile, or zymotic diseases........	312	296	265	218	1,091	13·39
II.	Parasitic diseases	9	10	8	6	33	·40
III.	Dietetic diseases.........	10	7	63	14	94	1·15
IV.	Constitutional diseases.	132	99	503	304	1,038	12·74
V.	Developmental diseases	135	105	420	185	845	10·37
VI.	Local diseases.............	841	660	1,418	849	3,768	46·23
VII.	Violence	84	52	519	95	750	9·20
VIII.	Ill-defined and not specified causes	235	185	85	26	531	6·52
	All causes.........	1,758	1,414	3,281	1,697	8,150	100·00

COUNTRY DISTRICTS.

Class I.—Specific Febrile, or Zymotic Diseases.

Zymotic diseases.

Order 1. *Miasmatic Diseases.*—Chicken-pox, 1; measles, 95; scarlet fever, 40; influenza, 14; whooping cough, 31; mumps, 3; diphtheria, 101; cerebro-spinal fever, 9; simple and ill-defined fever, 5; typhoid, enteric fever, 252.

Order 2. *Diarrhœal Diseases.*—Cholera, 39; diarrhœa, 324; dysentery, 80.

Order 3. *Malarial Diseases.*—Remittent fever, 17; ague, 1.

Order 4. *Zoogenous Diseases.*—None.

Order 5. *Venereal Diseases.*—Syphilis, 16; gonorrhœa, stricture of urethra, 5.

Order 6. *Septic Diseases.*—Phagedæna, 1; erysipelas, 27; pyæmia, septicæmia, 16; puerperal fever, 14.

Class II.—Parasitic Diseases.

Thrush, 18; hydatid disease, 14; worms, &c., 1.

Class III.—Dietetic Diseases.

Starvation, want of breast milk, 34; intemperance—*(a)* chronic alcoholism, 50; *(b)* delirium tremens, 9; *(c)* opium-smoking, 1.

Class IV.—Constitutional Diseases.

Constituti diseases.

Rheumatic fever, rheumatism of heart, 36; rheumatism, 15; gout, 10; rickets, 3; cancer, 229; tabes mesenterica, 122; tubercular meningitis (hydrocephalus), 58; phthisis, 484; other forms of tuberculosis, scrofula, &c., 48; purpura, hæmorrhagic diathesis, 8; anæmia, chlorosis, leucocythæmia, 12; diabetes millitus, 12; leprosy, 1.

Class V.—Developmental Diseases.

Premature birth, 194; atelectasis, 14; cyanosis, 10; spina bifida, 4; imperforate anus, 2; cleft palate, 3; other congenital defects, 13; old age, 605, at ages ranging from 55 to 106 years.

Local diseases

Class VI.—Local Diseases.

Order 1. *Diseases of the Nervous System.*—Inflammation of the brain or its membranes, 114; apoplexy, 121; softening of the brain, 27; hemiplegia, brain paralysis, 119; paralysis agitans, 4; insanity, general paralysis of the insane, 59; chorea, 1; epilepsy, 48; convulsions, 412; laryngismus stridulus, 6; idiopathic tetanus, 7; paraplegia, diseases of the spinal cord, 27; brain disease (undefined), 56.

Order 2. *Diseases of the Organs of Special Sense.*—Epistaxis, disease of the nose, 1.

Order 3. *Diseases of the Circulatory System.*—Endocarditis, valvular disease, 95; pericarditis, 8; hypertrophy of heart, 5; angina pectoris, 2; syncope, 29; aneurism, 38; senile gangrene, 11; embolism, thrombosis, 9; phlebitis, 5; heart disease (undefined), 321.

Order 4. *Diseases of the Respiratory System.*—Laryngitis, 18; croup, 117; other diseases of larynx and trachea, 1; emphysema, asthma, 44; bronchitis, 396; pneumonia, 457; congestion of the lungs, 77; pleurisy, 54; lung disease (undefined), 20.

Order 5. *Diseases of the Digestive System.*—Stomatitis, 18; dentition, 119; sore throat, quinsy, 11; dyspepsia, 8; hæmatemesis, 4; melæna, 8; diseases of the stomach, 56; enteritis, 215; ulceration of intestines, 13; ileus, obstruction of intestine, 41; stricture, or strangulation of intestine, 4; intussusception, 7; hernia, 13; fistula, 1; peritonitis, 55; ascites, 8; gallstones, 2; cirrhosis of liver, 36; hepatitis, 44; jaundice, 32; other diseases of liver, 57; others, 12.

Order 6. *Diseases of the Lymphatic System and Ductless Glands.*—Diseases of lymphatic system, 5; diseases of spleen, 1; bronchocele, 2; Addison's disease, 1.

Order 7. *Diseases of the Urinary System.*—Acute nephritis, 34; Bright's disease, 55; uræmia, 16; suppression of urine, 9; calculus, 6; hæmaturia, 2; disease of bladder and prostate, 32; kidney disease (undefined), 19.

Order 8. *Diseases of the Organs of Generation.*—Ovarian disease, 4; diseases of uterus and vagina, 4; disorders of menstruation, 6; pelvic abscess, 3; perineal abscess, 1.

Order 9. *Diseases of Parturition.*—Abortion, miscarriage, 8; puerperal mania, 1; puerperal convulsions, 10; placenta prævia, flooding, 12; other accidents of childbirth, 41.

Order 10. *Diseases of the Organs of Locomotion.*—Caries, necrosis, 6; arthritis, ostitis, periostitis, 1; others (curvature of spine, &c.), 4.

Order 11. *Diseases of the Integumentary System.*—Carbuncle, 1; phlegmon, cellulitis, 2; lupus, 2; ulcer, bed sores, 1; eczema, 3; pemphigus, 2; others, 1.

Class VII.—Violence.

Violent deaths.

er 1. *Accident or Negligence.*—Fractures and contusions, 251; wounds inshot, 26; *(b)* cuts, 15; burns, 84; scalds, 18; sunstroke, 30; light-3; poison, 9; bite of snake or insect, 5; drowning, 133; suffocation, therwise (blood poisoning, umbilical hæmorrhage, amputation, gored tle, &c.), 26.

er 2. *Homicide.*—Murder, 14; manslaughter, 5.

er 3. *Suicide.* Wounds *(a)* gunshot, 20; *(b)* cut, stab, 10; poison, rowning, 5; hanging, 12; otherwise, 5.

er 4. *Execution.*—Judicial hanging, 1.

er 5. *Violent Deaths not classed.*—Found drowned, 23; otherwise, 1 verdicts).

Class VIII.—Ill-defined and not Specified Causes.

psy, 41; atrophy, debility, inanition, 410; mortification, 2; tumour, cess, 4; hæmorrhage, 3; other ill-defined and not specified causes, 64.

Males, 5,039; Females, 3,111. Total, 8,150.

Fatality of phthisis.

om the foregoing it will be seen that the number of deaths phthisis in the Colony during 1888 was greater than from other disease. The following are the principal causes of arranged in order of fatality:—

	Number of deaths.		Number of deaths.
is	1,045	Bright's disease	140
ents	900	Tubercular meningitis (hydrocephalus)	134
hy, debility (infants)	886	Suicides	132
ge	718	Congestion of the lungs	125
nonia	682	Intemperance	120
œa	676	Scarlet fever	111
lsions	664	Dysentery	108
hitis	629	Peritonitis	95
disease (exclusive of carditis and aneurism)	614	Tuberculosis, scrofula, &c.	95
itis	514	Insanity	91
id, enteric fever	434	Malformations	89
r	404	Cholera	88
ture birth	388	Epilepsy	86
diseases	286	Pleurisy	71
tion	246	Ileus, obstruction of intestines	70
heria	240	Syphilis	62
exy	239	Aneurism	61
mesenterica	237	Asthma	61
mation of the brain	225	Diseases of spinal cord	57
es	218	Rheumatic fever and rheumatism of heart	53
arditis, valvular disease, pericarditis	216	Dropsy	52
es of the urinary system lusive of Bright's disease)	213	Found drowned	52
	210	Laryngitis	52
sis	178	Rheumatism	41
irth and puerperal fever	151	Whooping cough	35

Percentage of Deaths to total Deaths, and Rate of Mortality per Thousand persons living in New South Wales from the several Classes of Diseases.

Causes of Death.	1881.			1882.			1883.			1884.		
	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.
Specific febrile, or zymotic diseases	1,704	14·77	2·24	2,081	16·24	2·62	1,815	14·82	2·17	2,359	16·59	[illegible]
Parasitic diseases	48	·42	·06	54	·42	·07	51	·42	·06	66	·47	[illegible]
Dietetic diseases	222	1·92	·29	265	2·07	·33	172	1·40	·20	198	1·39	[illegible]
Constitutional diseases	1,420	12·31	1·87	1,442	11·25	1·81	1,517	12·38	1·82	1,639	11·53	[illegible]
Developmental diseases	1,016	8·81	1·34	1,220	9·52	1·53	1.232	10·06	1·48	1,270	8·93	[illegible]
Local diseases	5,195	45·03	6·83	5,761	44·95	7·25	5,495	44·86	6·59	6,343	44·60	[illegible]
Violence	906	7·85	1·19	904	7·05	1·14	850	6·94	1·02	990	6·96	[illegible]
Ill-defined and not specified causes	1,025	8·89	1·35	1,089	8·50	1·37	1,117	9·12	1·34	1,355	9·53	[illegible]
	11,536	100·00	15·17	12,816	100·00	16·12	12,249	100·00	14·68	14,220	100·00	[illegible]

Causes of Death.	1885.			1886.			1887.			1888.		
	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.
Specific febrile, or zymotic diseases	2,382	15·59	2·56	2,315	15·87	2·36	1,978	14·71	1·93	2,143	14·87	[illegible]
Parasitic diseases	89	·58	·09	82	·56	·08	61	·45	·06	53	·37	[illegible]
Dietetic diseases	211	1·38	·23	198	1·36	·20	179	1·33	·18	183	1·27	·17
Constitutional diseases	1,837	12·02	1·97	1,980	13·57	2·02	1,896	14·10	1·85	2,111	14·65	[illegible]
Developmental diseases	1,326	8·68	1·42	1,285	8·81	1·31	1,128	8·39	1·10	1,195	8·29	[illegible]
Local diseases	6,951	45·48	7·47	6,482	44·44	6·61	6,110	45·43	5·98	6,545	45·43	[illegible]
Violence	1,106	7·24	1·19	1,083	7·42	1·11	1,148	8·54	1·12	1,138	7·90	[illegible]
Ill-defined and not specified causes	1,380	9·03	1·48	1,162	7·97	1·19	948	7·05	·93	1,040	7·22	[illegible]
	15,282	100·00	16·41	14,587	100·00	14·88	13,448	100·00	13·15	14,408	100·00	[illegible]

ACCIDENTS.

Accidental deaths.

Accidental deaths are very numerous, especially in the country. The number registered during 1888 was 900, or 272 in the Metropolis and 628 in the country districts. The numbers for 1887 were 211 and 692 respectively. A considerable increase is therefore apparent in the Metropolis and a decrease in the country. The Bulli disaster, which occurred in the beginning of 1887, increased the total for that year. This was an explosion in a coal mine, about 45 miles south of Sydney, which occasioned the deaths of 81 miners. For the aid of the bereaved families the public subscribed liberally, not only in this but in some of the other Colonies, notably in Victoria. The amount raised was over £43,500.

ACCIDENTS, 1883-8.

	1883.	1884.	1885.	1886.	1887.	1888.
Sydney and Suburbs	177	208	281	225	211	272
Country	586	664	676	637	692	628
	763	872	957	862	903	900

In the following table a more detailed account will be found of the various accidents during the last ten years:—

ACCIDENTS, 1879-88.

	Fractures, Contusions.	Gunshot Wounds.	Cuts, &c.	Burns, Scalds.	Sunstroke.	Lightning.	Poison.	Bite of Snake or Insect.	Drowning.	Suffocation.	Otherwise.	All cases.		
												M.	F.	Total.
1879	281	11	14	75	45	*	27	5	241	33	5	591	146	737
1880	326	27	13	84	26	*	23	8	206	42	17	607	165	772
1881	394	10	8	92	30	*	32	5	159	35	7	606	166	772
1882	351	23	15	96	36	*	38	...	216	29	6	660	150	810
1883	310	25	14	85	21	*	44	4	213	35	12	594	169	763
1884	403	24	19	95	41	*	42	8	203	29	8	685	187	872
1885	448	13	23	121	34	*	41	3	222	42	10	755	202	957
1886	357	23	14	114	37	3	12	5	210	60	27	670	192	862
1887	352	11	18	93	24	2	16	3	228	129	27	727	176	903
1888	396	28	22	133	37	5	15	5	176	42	41	713	187	900
Total.........	3,618	195	160	988	331	10	290	46	2,074	476	160	6,608	1,740	8,348

* Included with "Sunstroke" during these years.

The average annual rate of accidents during the years 188 1888 has been 92 per 100,000 of the population. This, alth much lower than in Queensland, is higher than in the other colo or in any country whose records are available for compariso will be seen from the following statement :—

Accidents per 100,000 of population, per annum.

New South Wales	92	Italy	
Victoria	80	Germany	
Queensland	137	Prussia	
South Australia	64	Austria	
Tasmania	68	Hungary	
New Zealand	83	Belgium	
England and Wales	62	Denmark	
Scotland	62	Norway	
Ireland	37	Sweden	
France	34	Russia	
Spain	21	United States	
Switzerland	64		

SUICIDES.

Number and modes of suicides.

The number of suicides registered during the thirteen 1876-88, and the various modes adopted by the suicides for t life, are :—

Year.	Shooting.		Cut, Stab, &c.		Poison.		Drowning.		Hanging.		Other Modes.		All ca	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1876	2	...	12	2	7	6	3	1	12	...	2	...	38	9
1877	9	...	11	1	9	2	8	2	10	2	6	...	53	7
1878	...	...	8	...	5	...	2	...	9	...	1	...	25	...
1879	9	...	10	1	6	2	5	...	11	1	1	...	42	4
1880	11	...	9	3	15	4	3	3	12	5	3	...	53	15
1881	16	...	10	1	8	2	8	2	22	2	11	1	75	8
1882	6	...	10	...	8	5	5	4	11	2	4	...	44	11
1883	12	...	10	...	5	1	2	...	14	1	8	1	51	3
1884	17	...	12	1	9	6	8	3	14	4	6	1	66	15
1885	19	1	18	...	13	5	1	3	26	5	4	...	81	14
1886	24	1	12	...	14	6	3	3	23	3	6	...	82	13
1887	22	...	14	1	17	11	14	7	26	4	4	1	97	24
1888	29	...	18	5	26	19	7	4	16	1	6	1	102	30
Total	176	2	154	15	142	69	69	32	206	30	62	5	809	153

Suicide by hanging claims the largest number of male vic for the thirteen years ended 1888, viz., 206 ; but death by poiso was most favoured by women.

Proportion of suicides to total deaths.

Number of Suicides and Proportion to Total Deaths.

Year.	Suicides by males.		Suicides by females.		Total Suicides.	
	No.	Per thousand of total deaths of males.	No.	Per thousand of total deaths of females.	No.	Per thousand deaths.
1876	38	5·84	9	1·92	47	4·02
1877	53	9·02	7	1·75	60	6·08
1878	25	3·98	...	....	25	2·32
1879	42	6·90	4	·97	46	4·51
1880	53	7·98	15	3·26	68	6·05
1881	75	11·11	8	1·67	83	7·19
1882	44	5·79	11	2·11	55	4·29
1883	51	7·17	3	·58	54	4·41
1884	66	7·93	15	2·54	81	5·70
1885	81	9·10	14	2·19	95	6·22
1886	82	9·64	13	2·13	95	6·51
1887	97	12·47	24	4·23	121	9·00
1888	102	12·07	30	5·04	132	9·16

Proportion to population.

In proportion to the whole population the yearly number of suicides is very light, and bears favourable comparison with the other colonies of the group. For the sake of clearness the rates in the following table are for every 100,000 of the population.

Year.	Number of suicides.	Per 100,000 of mean population.
1876	47	7·8
1877	60	9·5
1878	25	3·8
1879	46	6·7
1880	68	9·4
1881	83	10·9
1882	55	6·9
1883	54	6·5
1884	81	9·2
1885	95	10·2
1886	95	9·7
1887	121	11·8
1888	132	12·4
	Mean............	8·8

Suicides in New South Wales compared with other colonies.

The rates of the other Australasian Colonies are for the most part higher than in New South Wales; though in respect to suicide, all the colonies, Tasmania alone excepted, compare somewhat unfavourably with the United Kingdom, where deaths by suicide average only 6·97 per 100,000.

Deaths from Suicide in the Australasian Colonies.

Colony.	Per 100,000 of mea population.
New South Wales	8·8
Tasmania	5·1
South Australia	8·7
New Zealand	9·5
Victoria	11·3
Queensland	13·5

The above are the mean annual rates from 1876. Informa for Western Australia is not to hand for a series of years, but suicides in that colony during 1888 numbered 6, or at the rat 14·2 per 100,000 of population.

EXPECTATION OF LIFE.

Meaning of term.

The number of deaths at the various ages taken in connec with the numbers of persons living at each period of life, as closed by the census, forms the basis of a calculation which g most interesting information, namely, the length of time that po of any age may expect to live. Not that the exact age to which given individual will attain can be ascertained; but, by tal a number of persons at a given age, the *average* duration of beyond that age may be estimated; and it is as certain that s will out-live the period of life set down in the table as it is some will not survive to reach it. The idea has been very cle expressed by Babbage, who wrote :—"Nothing is more uncer than the duration of life when the maxim is applied to individual, but there are few things less subject to fluctua than the duration of life in a multitude of individuals." It i this principle that annuities and life assurances can be made subject of definite and exact calculations, the final results b found to vary within very narrow limits. The duration of is a problem upon which vital statistics throw considerable lig

Theory of expectation of life.

he table here presented is calculated for the three colonies of South Wales, Victoria, and Queensland taken together, from istics for the years 1870-81; but before drawing a comparison een the estimates therein contained and the results that have obtained in other countries, it may be well to explain that pplication of the theory of computing the average duration of an life after any given age is founded on two assumptions. "Of e the first is that the experience of the future will accord with of the past; that is to say, that what ratio soever may have found to exist in times past between the number surviving the number dying in a given time, out of a specified number dividuals observed upon, the same ratio will be found to sub- in time to come between the number living and the number g in the same space of time out of any given number of indi- als similarly circumstanced with the others. And the second mption is, that the individuals, the possibility of whose living dying in any specified time may be in question, have all the e prospect of longevity with each other."* The phrase "ex- tation of life" has been taken exception to by some writers, on ground that it is misleading to the uninitiated. The idea ended to be conveyed is the mean time which a number of sons at any age will live after that age. The late Dr. Farr, R.S., favoured the term "after-lifetime" as being a more rect expression, and in his report wrote as follows:—"The after- time of men at the age of 30 is 33 years, by the English Life ble; 33 years is not the precise time probably that any one of at age will live, but the average time that a number of men of at age will live taken one with another. Age + after-lifetime lifetime. At age 30 this is 30 + 33 = 63, the average age which en now aged 30 will attain. At birth this is 0 + 40 = 40; when etime and after-lifetime are the same thing. The lifetime simply, ithout the addition at a given age, will serve to express in one rd what is often improperly called the "expectation of life at rth."

Tables of Life Contingencies. Peter Gray, F.R.A.S., &c., pp. 36 and 37.

Experience of A.M.P. Society

In addition to the expectation of life in the three colonies above-mentioned will be found a column showing the H.M. (healthy male) table of the Australian Mutual Provident Society. And while the after-lifetime at each age from 10 to 50 in the latter is higher than in the former, the gradation is much the same in each calculation. That one should give an estimate of greater longevity, after different ages, than the other is but natural, for in computing the table for the different colonies the total numbers of persons living and dying at each period of life are taken into consideration, whereas in the case of the H.M. table only selected lives, or such as would be accepted by an insurance society, form the basis of computation. Looking at the two tables, therefore, in their true light, the one is more an index of the correctness of the other than if the figures in both were identical. Dr. Farr calls the Life Table a *biometer*, and speaks of it as of equal importance, in all inquiries connected with human life or sanitary improvements, with the barometer or thermometer and similar instruments employed in physical research; and as being also the keystone or pivot on which the whole science of life assurance hinges. For even supposing that an insurance society had empirically arrived at an equitable rate of premium for assuring lives, the Mortality or Life Table is still required in order to ascertain the value of such premiums for a prospective term of years, as against the value of the sums assured thereby, so that a statement of assets and liabilities may be periodically prepared. Without such knowledge a division of "profits" would be impossible. In fact the Life Table is absolutely essential for the "solution of all questions depending on the duration of human life."

Length of life in other countries

By way of comparison several additional columns are here given. They are reprinted from Mulhall's Dictionary of Statistics, and show the expectation of life in England, and in various other countries.

Age.	*New South Wales, Victoria, and Queensland.		H.M. A.M.P. Soc.	England.		Holland.		Belgium.		Sweden.		Saxony.	United States	Age.
	M.	F.		M.	F.	M.	F.	M.	F.	M.	F.			
Birth	46·5	49·6	...	41·9	45·2	31·4	36·4	...	...	41·3	45·6	....	....	Birth.
5 years	53·0	55·4	...	51·5	53·6	48·7	49·2	...	...	49·4	53·0	....	....	5
10 ,, ...	49·2	51·7	50·3	48·2	50·3	45·9	46·5	43·8	44·8	46·5	50·0	47·0	48·7	10
15 ,, ...	44·9	47·4	46·2	43·9	46·2	...	...	...	...	...	...	....	....	15
20 ,, ...	40·8	43·3	42·1	39·9	42·1	38·3	39·2	36·4	37·7	38·6	42·1	39·3	42·2	20
25 ,, ...	37·0	39·4	38·4	36·1	38·4	...	...	...	...	...	...	....	....	25
30 ,, ...	33·3	35·7	34·7	33·2	34·1	31·8	32·4	30·5	31·9	31·2	34·5	32·1	35·3	30
35 ,, ...	29·7	32·3	31·0	28·9	31·1	...	...	...	..	...	...	....	....	35
40 ,, ...	26·2	28·9	27·4	26·5	27·5	25·0	26·4	24·8	26·1	24·3	27·2	25·0	28·2	40
45 ,, ...	22·9	25·6	23·8	22·3	24·2	...	...	...	...	...	...	....	....	45
50 ,, ...	19·8	22·3	20·3	19·9	20·8	18·5	19·7	18·9	20·3	18·0	20·1	18·0	20·9	50
55 ,, ...	16·7	18·8	17·0	16·1	17·4	...	...	...	...	...	...	....	....	55
60 ,, ...	13·8	15·5	13·8	13·6	14·5	12·8	13·3	12·4	13·9	12·3	13·5	11·7	14·1	60
65 ,, ...	11·2	12·5	11·0	10·8	11·5	...	...	...	...	...	...	....	....	65
70 ,, ...	8·9	9·7	8·5	8·6	9·1	7·9	8·1	8·1	8·3	7·4	8·0	6·9	8·5	70
75 ,, ...	6·9	7·2	6·4	6·5	7·0	...	...	...	...	...	...	....	....	75
80 ,, ...	5·4	5·7	4·7	5·2	5·6	4·4	4·5	5·2	5·4	3·9	4·3	3·9	4·4	80
85 ,, ...	4·0	4·2	3·5	3·8	4·1	...	...	...	...	...	...	....	....	85
90 ,, ...	3·0	3·2	2·4	2·8	3·1	2·4	2·7	2·9	3·1	2·4	2·8	....	....	90

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* *Vide* A. F. Burridge in Journal of Institute of Actuaries, vol. xxiv.

From this table it will be seen that the colonies stand very
when compared with other quarters of the globe. The ave
expectation of life of males and females at infancy, youth,
after the age of 30 years is higher than in any of the coun
given.

VACCINATION.

Vaccination optional.

Vaccination is not compulsory in New South Wales, a
resorted to only in times of scare, when an epidemic of smal
is thought imminent. It is easy to discover, from the retu
the Government vaccinators, the years when the community
threatened by the disease, as at such times the number of pe
submitting themselves to vaccination largely increased.
number returned does not include those treated by private me
officers, by whom a large number of persons are vaccinated.

Persons Vaccinated by Government Medical Officers.

Year.	Sydney and Suburbs.	Country.	Total.	Year.	Sydney and Suburbs.	Country.	T
1876	1,969	2,576	4,545	1883	296	610	
1877	5,289	11,962	17,251	1884	630	6,569	7,
1878	282	2,028	2,310	1885	345	1,876	2,
1879	657	4,981	5,638	1886	452	1,291	1,
1880	460	4,699	5,159	1887	1,059	2,199	3,
1881	6,728	53,491	60,219	1888	1,091	1,004	2,
1882	250	1,989	2,239				

Age of persons vaccinated.

The number and ages of persons vaccinated by the Govern
vaccinators during 1888 will be found below :—

District.	Under 1 year.	From 1 to 5 years.	From 5 to 10 years.	10 years and upwards.	T
Sydney and suburbs	232	461	398	...	1,
Country districts	70	362	539	33	1,
Total	302	823	937	33	2,

INSANITY.

The number of insane persons under treatment in hospita
almost a fixed proportion of the total population, viz., 2·78

ınd. Since 1871 the proportion has varied only 0·7 above, ·11 per thousand below, the average stated. The hospitals ıane, under the immediate control of the Government, are number; four for ordinary insane, and one, at Parramatta, minals. Besides these there is one licensed house.

Number of Insane under treatment.

number of insane persons under treatment on the 31st ıber, 1888, under official cognizance, was 2,897, distributed ows:—

Name of Hospital.	No. on Register.		
	Males.	Females.	Total.
ville	492	280	772
ıatta, free	651	338	989
». criminal	54	9	63
Park	427	303	730
stle	133	108	241
River	19	83	102
Total	1,776	1,121	2,897

ese figures are 76 in excess of the total for 1887.

Proportion of insane a constant quantity.

e proportion of insane to the whole population, as already ed out, is almost a constant quantity, as will be seen from the ıpanying table, giving the number of persons in hospitals for e at the close of each year from 1871 to 1888.

nded mber-	No. of Insane.	Proportion of Insane to population per 1,000.	Year ended 31 December.	No. of Insane.	Proportion of Insane to population per 1,000.
71	1,387	2·67	1881	2,218	2·84
72	1,440	2·69	1882	2,307	2·84
73	1,526	2·75	1883	2,403	2·80
74	1,588	2·76	1884	2,524	2·79
75	1,697	2·85	1885	2,643	2·76
76	1,743	2·83	1886	2,717	2·71
77	1,829	2·84	1887	2,821	2·70
78	1,916	2·85	1888	2,897	2·67
79	2,011	2·83			
80	2,099	2·83		Mean...	2·78

Amount of insanity in England.

The amount of insanity in New South Wales and in England, compared with their respective populations, is about the same, though there appears to be a tendency in the latter country for the rate to increase. The greatest proportion of lunacy in these colonies is found in Victoria, and the lowest in South Australia, Tasmania, and Queensland.

Insanity in the United Kingdom and Australasian Colonies.

Country.	Insane persons per 1,000 of population.	Country.	Insane persons per 1,000 of population.
England	2·88	Queensland	2·44
Scotland	2·91	South Australia	2·40
Ireland	3·16	Western Australia	2·85
New South Wales	2·67	New Zealand	2·81
Victoria	3·29	Tasmania	2·45

Death-rate of the Insane.

The percentage of deaths of insane persons is comparatively light. The following table has been computed on the basis of the average number of patients resident in hospitals for insane:—

Year.	Percentage of deaths of average number resident.			Year.	Percentage of deaths of average number resident.		
	Male.	Female.	Total.		Male.	Female.	Total.
1876	7·76	5·85	7·03	1883	9·71	4·98	6·64
1877	8·90	4·25	7·19	1884	8·18	6·22	7·43
1878	8·57	5·23	7·32	1885	7·61	4·97	6·39
1879	7·63	4·28	6·85	1886	7·54	6·37	7·08
1880	7·75	5·93	7·04	1887	6·64	7·03	6·79
1881	6·52	4·21	5·63	1888	7·59	6·32	7·11
1882	6·76	5·61	6·32				
				Mean ...	7·78	5·48	6·85

number of persons admitted to the hospitals has varied a deal. The effect of the continued commercial depression the years 1885 and 1886 was experienced in the unusual r of idiotic and imbecile children, as well as demented found amongst the admissions, whose relatives would ly have maintained them in more prosperous times.

Increase of admissions in seasons of depression.

issions to Hospitals for Insane and Proportion to Mean Population.

Admissions.	Proportion to population per 1,000.	Year.	Admissions.	Proportion to population per 1,000.
340	0·66	1881	494	0·64
303	0·57	1882	473	0·59
342	0·62	1883	476	0·57
330	0·58	1884	493	0·55
356	0·60	1885	567	0·60
360	0·59	1886	567	0·58
457	0·72	1887	532	0·52
424	0·64	1888	587	0·55
440	0·63			
476	0·65		Mean	0·60

e is no law in force in this Colony to prevent the influx of persons; and, as a consequence, the splendid hospitals, the bounty of the Government has established for the treat-f the insane, have been the means of burdening the com-with the care of unfortunate persons belonging to other ies, where the treatment meted out to the insane is less us or less scientific than in New South Wales. Were it this influx of insane from outside its boundaries the rate s Colony would be much lower than it is at present.

Influx of Insane from abroad.

Birth-places of Patients in Hospitals for Insane, 1888.

Country.	No. of Patients.	Percentage to total.	Country.	No. of Patients.	Percentage to total.
New South Wales	1,016	29·37	France	20	0·58
Other British Colonies	126	3·64	Germany	85	2·46
England	852	24·63	China	78	2·25
Ireland	922	26·66	Other Countries and not ascertained	188	5·44
Scotland	172	4·97			

In this and the two following tables all the patients received into the hospitals for insane during the whole of the year are enumerated; the number remaining under control on the 31st December is given in a previous table.

Small proportion of Insane born in the Colony.

The number of persons under restraint, who are natives of this Colony, is only 29·37 per cent. of the total, whilst the native-born element of the total population is at least 64 per cent. Of the British-born patients, England contributes very nearly twice the number that her population in this country would warrant, and Ireland at least thrice the number.

Ages of Insane.

The ages of the insane are set forth in the following table, which shows that nearly one-fourth of the whole number are between 40 and 50 years of age. The table deals only with patients in hospitals for insane, and gives the percentage for 1888 at each period of life.

Ages of Insane.	No. of Patients.	Percentage of all ages.	Percentage to total popula at respective ag Census 18
Under 5 years	3	·09	14·84
5 to 10	23	·66	13·22
10 ,, 15	48	1·39	11·81
15 ,, 20	108	3·12	10·11
20 ,, 30	524	15·15	18·03
30 ,, 40	775	22·41	12·95
40 ,, 50	861	24·89	9·46
50 ,, 60	643	18.59	5·27
60 ,, 70	311	8·99	2·96
70 ,, 80	139	4·02	1·09
80 years and upwards	24	·69	0·2

The major portion of the persons under restraint are si amongst the married, females largely predominate, as also am the widowed. The condition as to marriage of patients in hospitals for the insane during 1888 is shown hereunder.

Condition as regards marriage.

Condition as to Marriage.	Male.	Female	Total.
Single	1,335	512	1,847
Married	491	571	1,062
Widowed	76	142	218
Unascertained	235	97	332

Intemperance as a cause of insanity.

It is popularly supposed that the principal cause of insanity is intemperance. The experience of this Colony, however, does not bear out this opinion. The amount of insanity directly due to drink, though certainly large, is not so considerable as that due to other causes. As far as the records of the hospitals show, the percentage of persons admitted suffering from insanity traceable to intemperance, is not more than 12·41 per cent. of the total admissions.

Persons insane from drink soon recover.

Persons suffering from mania induced by excess of drink recover comparatively quickly, and at any one time their number in the hospitals for the insane is scarcely more than 5·5 per cent. The most potent cause of insanity appears to be hereditary influence. How far this is productive of insanity cannot, however, be exactly determined; for although the Inspector-General of the Insane, a high authority on lunacy, has ascertained that hereditary influence and congenital defect can be credited with only 8·98 per cent. of the total insanity, this percentage gives no idea of the actual amount of hereditary insanity in the Colony. Of the large number of patients the causes of whose insanity is unknown, it is believed that in most instances the insanity is due to hereditary influence, and even in those cases where the primary cause of insanity has been ascertained, there is strong presumption that many of the patients have inherited an insane neurosis.

Insane neurosis

In the following table will be found the per-centages of the various causes of insanity. The calculations are made on the apparent or assigned causes in the cases of all patients admitted into the asylums for the insane :—

Causation of Insanity.

Cause of Insanity.	Percentage of male insanity.	Percentage of female insanity.	Per
Moral :—			
Domestic trouble (including loss of relatives and friends)	1·03	5·46	
Adverse circumstances (including business anxiety and pecuniary difficulties)	3·88	2·73	
Mental anxiety and "worry" (not included under above two heads), and overwork	2·59	3·99	
Religious excitement	1·81	3·57	
Love affairs (including seduction)	0·39	1·89	
Fright and nervous attack	0·26	0·63	
Isolation	1·55	0·21	
Nostalgia.............................	...	0·42	
Physical :—			
Intemperance in drink	15·14	7·99	
Do (sexual)	0·39	0·63	
Venereal disease	0·78	..	
Self-abuse	1·81	...	
Sunstroke	2·97	0·21	
Accident or injury	3·49	1·26	
Pregnancy	...	1·26	
Parturition and the puerperal state..............	...	8·62	
Lactation.............................	...	2·10	
Uterine and ovarian disorders...	...	1·89	
Puberty	0·26	0·63	
Change of life	...	1·68	
Fevers	...	0·63	
Privation and overwork	0·78	0·42	
Phthisis	0·39	0·21	
Epilepsy	5·69	5·67	
Disease of skull and brain	2·33	1·05	
Old age	4·66	3·36	
Other bodily diseases and disorders	1·55	4·83	
Excess of opium	0·26	0·42	
Previous attacks	7·37	6·09	
Hereditary influence ascertained..	4·01	7·36	
Congenital defect ascertained......	3·49	3·99	
Other ascertained causes	0·39	...	
Unknown	32·73	20·80	

uring the year 1888 the death of persons afflicted with acy numbered 222, viz., 143 males and 79 females. The lowing are the causes of death, and the number who died from h disease :—

Deaths of insane.

	Males.	Females.	Total.
MOTIC DISEASES—			
Parotitis,..	...	1	1
Typhoid fever	2	2	4
Diarrhœa	7	4	11
Pyæmia	1	...	1
IETETIC DISEASES—			
Chronic alcoholism	1	1	2
Delirium tremens	1	...	1
CONSTITUTIONAL DISEASES—			
Cancer	3	1	4
Phthisis	4	6	10
Tuberculosis	1	...	1
Purpura	1	1	2
DEVELOPMENTAL DISEASES—			
Old age	8	7	15
LOCAL DISEASES—			
Meningitis	1	1	2
Apoplexy	9	...	9
Softening of the brain	1	1	2
Insanity, general paralysis of the insane	57	33	90
Epilepsy	16	13	29
Valvular disease of the heart	3	1	4
Pericarditis	1	...	1
Aneurism	1	...	1
Senile gangrene	1	...	1
Heart disease (undefined)	2	2	4
Bronchitis	3	1	4
Pneumonia	7	...	7
Congestion of the lungs	1	...	1
Gangrene of lungs	1	...	1
Cancrum oris	...	1	1
Melæna	2	...	2
Enteritis	1	...	1
Peritonitis	1	...	1
Liver disease	1	...	1
Kidney disease	3	...	3
Puerperal mania	...	1	1
Cellulitis	...	1	1
VIOLENCE—			
Amputation of leg	1	...	1
Manslaughter	1	...	1
Suicide by cutting throat	...	1	1
	143	79	222

Of the above total 20 males and 8 females were over 70 years of age, so that the malady of lunacy is not incompatible with ty. One male attained the age of 86 and one female 88

Lunacy not incompatible with longevity.

Cost of patients. The average weekly cost of maintaining insane patients in th hospitals is about 12s. 4d. per week, of which the State pay 11s. 1d., the balance being made up by contributions from th estates of the patients themselves, or by their friends. The sul joined table shows the average weekly cost per head, and averag private contributions from 1879 to 1888.

Average Weekly Cost of Patients in Hospitals for the Insane.

Year.	Cost per head to State.	Contribution per head from private sources.	Total weekly cost per head.
	s. d.	s. d.	s. d.
1879	12 1	0 7¼	12 8¼
1880	10 8¾	1 0¼	11 9
1881	10 8¼	1 2¼	11 10½
1882	12 0¼	1 2¼	13 2½
1883	11 5⅝	1 0¼	12 5⅞
1884	10 11⅞	1 3¼	12 3⅛
1885	11 3½	1 4½	12 8
1886	11 1¾	1 5½	12 7¼
1887	10 6	1 5½	11 11½
1888	10 2	1 6¼	11 8¼

Criminal Insane. Criminal lunatics are confined at Parramatta, and usually nu ber about 60 persons. The offences for which they are detained amongst the blackest in the calendar, as will be seen from table below. The offences for which the criminal insane w detained during 1888 were as follows :—

Criminal Insanity.

imes committed by the Insane.	Number of insane.		
	Males.	Females.	Total.
....	21	3	24
murder	1	......	1
ter	2	......	2
....	2	......	2
ssault..	1	......	1
offence	1	......	1
d wounding, shooting with intent, &c.	14	3	17
nd house-breaking	3	......	3
horse stealing	6	......	6
d petty thefts................................	2	......	2
malicious burning	1	1	2
suicide	......	1	1
....	......	1	1
Total.....................	54	9	63

PART XIV.

Employment.

Imperfect data.

TO obtain a fair approximation of the number of pe
engaged in various walks of life in this Colony is a
of no small difficulty, the information which might serve
basis for a calculation of this kind being of a very meagre
incomplete description. With the data in hand, howeve
approximation has been compiled, which will be sufficien
any rate, to give an idea of the manner in which the peo
New South Wales are occupied, although until another cens
the population of the Colony is taken, anything like an
knowledge of the occupations of the people cannot be arrive

Employment of Males.

During the year 1888 the number of males in the Colony
the age of 16 years was about 381,000. Of these 352,000
supporting themselves and their dependents, and engaged i
ployments specified below; 7,000 were a burthen to the ge
community, being inmates of gaols, asylums, or public institu
Of the number of workers given above 166,170 were en
in what are commonly termed works of production, and
distributed :—

Agriculture	69,790
Pastoral pursuits, including slaughtering for food	23,060
Mining	26,760
Manufactures, &c.	46,560

In trade and commerce, that is, in the business of buying or ing, and in pursuits incidental thereto, and in maritime pursuits, numbers were—

Trade and commerce.

Trade and commerce	28,000
Maritime pursuits	8,000

f those who were engaged in laborious occupations other than e just given the following are the approximate numbers :—

Skilled mechanics in building trades	26,000
Unskilled labourers	56,230
Personal attendance	28,500

esides the above there were—

Professional men	9,500
Government and municipal employés	21,500
Military and police	2,100

6,000 engaged in various callings, not included under any of eads above given, and chiefly in light manual occupations. e figures give a total of 352,000 ; so that there were in the ny 29,000 persons above the age of 16 years not employed. rge number of these were lads who were not yet engaged in strial occupations, and old persons supported by their relatives iends, besides 7,000 who were supported by the State ; the inder were those unable or undesirous to find employment, ersons whose means placed them above the need of work.

he number of females above the age of 16 years was, in 1888, oximately 267,000. Of this number, 69,500, or about 26 per ., were wage-earners, the great majority being engaged in estic service, as will appear in the following table :—

Employment of females.

Female Wage-earners.

Agriculture	2,600
Employed in manufactories, and needlewomen	11,500
Professional work	5,400
Trade	4,500
Domestic work and attendance	36,000
Otherwise engaged	9,500
	69,500

the total of all earners was 421,500, or 39·6 per cent.
population.

AGRICULTURE, MINING, AND PASTORAL PURSU

The number of persons regularly employed in pastoral
is 19,620, a comparatively small proportion when compar
the pastoral interests of the Colony. There is, however,
ment for a considerable number of others during a portio
year, and it is estimated that an additional 16,000 ha
work during the months of August to November at shea
other labour arising out of the wool season. Many of the
thus casually employed are farmers and selectors who are
leave their holdings during this portion of the year, wh
few are labourers from the neighbouring Colonies, especia
Victoria.

Hands employed in pastoral pursuits.

On sheep stations the number of persons employed was
or on an average one to every 2,500 sheep. On the catt
of the Colony there were about 2,020 hands, giving an
of one to every 750 head depastured. Taken by itself t
ment that 19,620 persons are regularly employed on sh

,000, or about 75 per cent. of the total value of goods, ng gold produced by the Colony and exported, is the this pastoral industry, while one-third of the earnings of ds traffic of the Railways of the Colony is also due to the urce. The business of slaughtering for food, which has ouped with stock-breeding, employs 3,443 hands.

ultural pursuits find regular employment for 72,390 and indirectly for many others. The area cultivated, ng fallow and grass land, is 799,000 acres, so that the stated would give 11 acres cultivated to each person ed, the averages being 1·3 acres in the vicinity of the lis, where market gardens, orchards, and vineyards are the rms of cultivation, and 11·5 acres in the other districts of ony.

Agriculture.

particulars above given, both in regard to stock and agri- must be taken as approximations. Although statistics ng employment are taken every year it will be readily ood that as stock-raising and farming are carried on in laces side by side, it is quite impossible to distinguish ely the number of hands assignable to each pursuit.

Statistics are approximate.

e chapters of this volume devoted to agriculture, stock, ning, will be found many other particulars regarding the engaged in these pursuits, as well as the nature of their ons. It will, therefore, be needless to discuss the question employment further in this place.

MANUFACTORIES.

ough New South Wales cannot be considered an important cturing country, this source of national wealth has by ns been neglected. During the year 1888 there were nanufactories or works of various descriptions, employing er a total of 45,564 hands, of whom 41,299 were males, and

Manufactories of New South Wales.

4,265 females. These works had machinery in operation developing a total of 24,990 horse-power, and valued at £5,743,025. While the value of land and buildings was £9,350,543, so that the total capital employed in works and manufactories was £15,093,568. Besides these there were 1,040 hands in works too small to be classified with those enumerated.

Various Colonies compared.

Estimated by the number of hands employed in industries, New South Wales stands second amongst the colonies of the group, Victoria holding first place, as will be seen from the following table compiled from statements obtained from official sources. The figures for Tasmania have been omitted, as the returns for that colony embrace many establishments not included in those of the other colonies. The number of hands employed, as shown in this and the subsequent tables, is somewhat less than given on page 428, certain works being omitted so that the comparison with the other colonies might be on an uniform basis. The following are the figures for the latest dates procurable :—

Colony.	Manufactories and Works.	Hands employed
*New South Wales	3,106	45,564
*Victoria	2,974	54,472
†Queensland	1,118	....
South Australia	731	9,946
‡New Zealand	1,946	22,094

* 1888-9. † 1887-8. ‡ Census, 1886.

Classification of manufactories in different colonies.

If, however, the value of plant and the steam power employed be made the standard of comparison, New South Wales stands first. The following is a classification of the works in the three colonies for which information is procurable. The particulars relating to New Zealand are for 1886, the details for the present year not having been published.

Classification.	New South Wales.			Victoria.			New Zealand.		
	Works.	Hands.	Value of Plant and Machinery.	Works.	Hands.	Value of Plant and Machinery.	Works.	Hands.	Value of Plant and Machinery.
	No.	No.	£	No.	No.	£	No.	No.	£
Treating raw material, the product of pastoral pursuits	193	2,338	162,619	168	1,789	115,949	107	1,123	42,530
Connected with food and drink or the preparation thereof	629	7,417	1,364,100	485	5,829	986,583	596	3,243	439,300
Clothing and textile fabrics	154	5,729	63,486	217	9,624	260,739	76	4,094	156,825
Building materials	715	7,675	763,376	683	11,232	717,112	423	5,739	513,327
Metal works, implements, machinery and engineering, railway carriages	355	8,986	1,074,921	339	9,344	778,977	97	2,342	150,781
Docks, slips, ship-building, and sail-making	71	1,061	315,300	26	271	67,055	90	307	34,690
Furniture, bedding, &c.	147	1,477	68,355	131	2,117	56,723	90	769	13,352
Paper, printing, binding, engraving, &c.	208	4,378	494,720	194	5,632	509,309	137	2,144	173,316
Vehicles, harness, saddlery	282	2,545	82,142	279	3,614	94,791	92	693	24,263
Light and heat	49	1,299	947,631	27	773	1,525,812	20	344	448,329
Other works	303	2,659	406,375	425	4,247	380,552	218	1,297	111,312
	3,106	45,564	5,743,025	2,974	54,472	5,493,602	1,946	22,095	2,108,025

Average value of works in different colonies.

The average value of plant in New South Wales is £1,849, the average power employed is 8 h.p., and the hands per factory, 14·5; in Victoria the figures are—Average value, £1,847; power, 8·3, and hands, 18·3; while in New Zealand they are—Value, £1,083; power, 7·9; and hands, 11·3. Estimating by the total hands employed, New South Wales is superior in works connected with food and drink, in works where ships are built or repaired, in treating raw material the product of pastoral pursuits, and in works connected with heating and lighting; in all other classes Victoria has the lead both over this colony and New Zealand. The superiority of New South Wales in the food manufactories is largely attributable to the employment created by the important industry for the treatment of raw sugar, obtained from cane grown in the colony. The large employment afforded by the works for refining or otherwise treating silver, copper, tin and lead, establishes the importance of the colony in the total of all works connected with metals. The classification of the works of these colonies under the heads above given is purely arbitrary, but may perhaps serve to illustrate the bearing of the natural resources of the different colonies on the encouragement of the manufacturing industry.

Plan adopted in compiling statistics.

In the Australian colonies most manufacturing industries are in their infancy, and are small in comparison with the large establishments of other countries, the number of establishments employing ten or more hands being only 1,029 in New South Wales, and 1,189 in Victoria. Unless, however, the beginnings of the various industries are now noted it will be impossible hereafter to trace their progress. No works which are simply retail establishments have been included in any of the following tables; on the contrary, steam or other power is employed in the majority of cases. Of the works which do not use power, only such have been enumerated as were in a fairly large way of business, or were of a special character, regarding which it was desirable to have statistics for uture reference. Clothing factories employing less than ten hands, and boot factories with less than six hands, have not been taken into account.

Average hands per factory.

The average number of hands employed in each establishment was 14·6; the average for the metropolitan district being 19·5, and for the country districts 11·0. Compared with the scale on which manufactories are worked in the older countries of the world, these averages will appear very small; but should evoke no surprise when the nature of the works is considered, and the sparseness of the population throughout a large portion of the Colony. The following is a complete list of the works in operation during the year:—

Manufactories Classified, with the Number of Hands, Power, and Value of Plant employed during the year 1887.

Description of Manufactory or Work.	Number of Works.	Total Hands.	Power of Plant or Machinery	Approximate Value of Plant or Machinery.	Approximate Value of Land and Buildings.
Raw Material, the production of Pastoral Pursuits—			Horse-power.	£	£
Boiling-down and glue	20	127	141	11,460	24,115
Bone-dust and manure	9	36	144	14,530	7,620
Grease	1	8	6	....	....
Tanneries	102	894	464	72,669	145,237
Wool-washing and Fellmongering	61	1,273	676	63,960	63,490
	193	2,338	1,431	162,619	240,462
Connected with Food and Drink—					
Aerated waters	150	1,103	399	132,032	139,505
Beer, ale, stout	71	805	741	204,550	439,430
Biscuits	8	435	97	60,400	60,420
Butter and cheese (steam)	63	459	335	36,273	64,555
Ditto (other)	116	665	45	8,285	42,020
Coffee and spice	6	61	49	9,600	3,450
Condiments	5	58	16	1,050	4,300
Confectionery	20	389	84	21,850	55,000
Flour	110	628	2,877	339,260	363,892
Fruit-canning	3	175	22	3,300	17,400
Ice and refrigerating	10	211	242	52,200	67,300
Jam	3	93	43	5,000	9.500

Description of Manufactory or Work.	Number of Works.	Total Hands.	Power of Plant or Machinery	Approximate Value of Plant or Machinery.	App V of L Bu
Connected with Food and Drink—continued.			Horse-power.	£	
Maizena and oatmeal ...	2	36	40	7,000	
Meat-curing	8	37	11	2,090	
Meat-preserving	4	280	298	23,650	
Rice	1	4	50	....	...
Self-raising flour and baking powder	7	69	9	3,460	
Sugar (refined)	1	210	250	....	...
Sugar (raw)	36	1,640	1,995	440,400	
Spirits (rum)	1	15	15	....	...
Vinegar	4	44	16	13,700	
	629	7,417	7,634	1,364,100	1,4
Clothing and Textile Fabrics—					
Boots and shoes	57	2,045	91	29,894	1
Clothing, millinery, &c.	71	3,272	3	7,952	
Furriers	2	7	......	700	
Hats and caps	13	141	4	1,460	
Oilskin clothing	2	39	......	450	
Shirts	3	40	......	30	...
Umbrellas	1	8	......	....	...
Woollen cloth	5	177	153	23,000	
	154	5,729	251	63,486	2
Building Materials—					
Asphalt and pavement	13	88	67	34,220	
Bricks	229	2,124	1,420	193,155	2
Joinery	69	1,124	560	67,540	
Lime	26	190	21	12,550	1
Modelling and patterns	11	84	......	3,770	
Marble	26	156	8	3,015	1
Paint and varnish	4	20	31	17,400	1
Pottery	20	273	159	21,630	
Saw-mills	317	3,616	5,194	410,096	6
	715	7,675	7,460	763,376	1,14
Metal Works, Machines, Machinery, &c.—					
Agricultural implements ...	32	181	83	19,360	2
Galvanised iron & plumbing	53	580	33	22,070	13
Iron and brass foundries	69	1,043	487	88,015	17
Ironworkers (other) ...	51	768	447	53,905	11
Machinery and engineering	65	1,550	1,309	290,950	61
Railway workshops, &c.	16	2,521	606	211,875	42
Smelting, silver, copper, tin, &c.	20	2,009	905	341,076	10
Tinware	42	251	8	11,670	3
Wire-works	7	83	31	36,000	2
	355	8,986	3,909	1,074,921	1,66

on of Manufactory or Work.	Number of Works.	Total Hands.	Power of Plant or Machinery	Approximate Value of Plant or Machinery.	Approximate Value of Land and Buildings.
ilding, Repair- &c.—			Horse-power.	£	£
docks, floating s, and slips	9	309	301	296,900	171,350
and blocks	1	13	6	....	....
tarpaulins, &c. ...	16	69	4	1,425	13,560
d boat building, &c.	45	670	101	16,975	53,390
	71	1,061	412	315,300	238,300
re, Bedding, —					
ng	13	153	43	8,930	44,000
l hair and flock...	6	26	50	2,080	2,895
ture	102	1,175	320	53,585	253,715
e-frames	18	52	......	2,280	22,150
ow-blinds	8	71	16	1,480	9,400
	147	1,477	429	68,355	332,160
Paper, Printing, Engraving—					
nt books, &c.	27	576	7	1,725	17,500
ving, &c.	6	18	......	630	3,700
....	1	99	200	.. ..	....
bags and boxes...	5	79	1	3,150	8,350
- lithography, tro-photo en- ing, &c.	3	95	14	7,000	20,000
ng and litho- hic printing	159	3,479	576	480,065	528,173
ng ink, printer's erials, sealing- , &c................	4	9	15	1,550	500
r stamps.	2	9	......	600	....
....	1	14	2	....	....
	208	4,378	815	494,720	578,223
s, harness, and dlery —					
es and waggons...	209	1,978	188	71,427	264,300
ery, saddle-trees, ps, &c.	73	567	8	10,715	74,020
	282	2,545	196	82,142	338,320
Fuel, and Heat—					
ic light	11	34	166	21,100	66,250
....	5	76	46	6,750	9,700
....	30	945	434	844,731	2,287,590
ene Oil	3	244	280	75,050	20,000
	49	1,299	926	947,631	2,383,540

Description of Manufactory or Work.	Number of Works.	Total Hands.	Power of Plant or Machinery	Approximate Value of Plant or Machinery.	Approxim Value of Land Building
			Horse-power.	£	£
Miscellaneous—					
Bark mills	4	19	35	2,120	4,
Baskets	7	50	......	2,850	3,
Brushes	6	47	......	395	7,
Chaff and crushed corn	97	451	545	23,583	104,
Chemicals, patent medicines, &c.	10	114	82	30,720	43,
Compressed & fancy leather	3	9	22	700	1,
Cooperage	12	119	3	1,450	21,
Dye works	8	42	6	2,125	9,
Electroplating	2	13	1	500	3,
Glass and glass-staining	3	99	16	9,150	20,
Jewellery	30	165	......	4,383	3,
Ladders and barrows	6	16	......	390	4,
Millet brooms	4	34	......	338	2,
Mint	1	24	30	....	......
Packing-cases	7	56	30	2,360	5,
Philosophical, optical, & surgical instruments	10	60	4	9,950	21,
Portmanteaux	3	16	......	320	2,
Ropes	8	124	101	14,685	17,
Scales	3	10	......	460	7,
Soap, candles, soap-powder, and soda	59	397	503	86,086	72,
Tobacco, cigars, &c.	9	715	135	89,150	129,
Other works not included above	11	79	14	124,660	282,
	303	2,659	1,527	406,375	767,
General total	3,106	45,564	24,990	5,743,025	9,350,

In order not to disclose the business of any establishment, in cases where the only one of each description, these particulars have been included under the last li "Other works not included above."

Large number of works for treating raw produce.

It will be seen that a large proportion of the establishme included in the foregoing list are connected with the preparat of food, or raw produce; for, out of a total of 45,564, the ha employed in treating food, or animal, vegetable, and mineral p ducts advanced one stage only towards complete manufact numbered 17,800, or 39 per cent. There has, however, been progress in other directions, and, as will be seen from a subsequ table, the growth of the manufacturing power has been in keep with the general progress observable in other departments industry. The number of persons dependent for their liveli on the manufacturing interest may be estimated at about 180, or one-sixth of the whole population of the Colony.

Progress of manufactures.

the following table the gradual progress of the manufacturing try of the Colony during the last decade may be readily l. It will be noticed that the total number of works of all has risen in the short period embraced by the table from in 1878, to 3,106 in 1888, or nearly 22 per cent., while the er of hands employed has advanced from 24,741 to 45,564, er 84 per cent. during ten years.

Hands employed in Works and Factories, 1878–88.

Year.	No. of Manufactories, &c.	No. of Hands employed.		
		Male.	Female.	Total.
	2,551	21,512	3,229	24,741
	2,654	22,989	2,695	25,684
	2,779	26,452	1,807	28,259
	2,961	28,819	2,372	31,191
	3,158	31,824	2,065	33,889
	3,224	32,350	2,384	34,734
	3,419	36,390	2,404	38,794
	3,541	38,255	3,420	41,677
	3,541	40,160	3,367	43,527
	3,349	39,365	3,686	43,051
	3,106	41,299	4,265	45,564

Females employed.

satisfactory feature of the progress exhibited is that the er of women employed in factories and works has not sed at the same rapid rate as male employés. In 1878, the er of females employed was 3,229, and in 1888, 4,265, show- n increase of 1,036, or 32 per cent., in ten years, while those opposite sex increased 92 per cent. during the same period. xamination of the following table will show that this increase een chiefly confined to book-binding and tobacco and boot ries, whilst in the manufacture of clothing, including shirts, women are now employed than was the case ten years ago. alling off is very marked in the number of hands employed irt factories. The decline is no doubt more apparent real, for this industry is largely carried on in other places those exclusively devoted to it, so that the shirt-makers are bly included with others under the comprehensive title of ng manufacturers.

Number of Females employed in Principal Industries for the period 1878–88.

Nature of Industry.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
Aerated Waters, &c. ...	5	11	6	14	14	189	12	23	7	4	24
Account Books, &c.	64	68	64	84	83	131	144	177	186	223	290
Bedding	45	22	31	35	43	60	52	60	45	35	37
Biscuits	......	5	11	14	26	33	53	62	79	91	98
Boots	299	373	341	377	341	377	418	433	409	436	427
Clothing	2,138	1,487	830	1,260	994	1,071	1,112	1,794	1,686	1,826	2,247
Confectionery	79	74	33	44	34	47	45	60	69	80	76
Hats and Caps	24	30	26	12	23	24	45	55	45	46	71
Jam	10	13	10	5	8	12	23	23	52	15	16
Printing	40	54	19	9	......	24	36	76	31	64	22
Paper Bags and Boxes...	6	7	10	22	4	2	19	24	37	45	49
Shirts	309	314	175	166	96	68	50	100	26	25	34
Soap-powder, Soap, and Candles	23	14	22	23	39	30	28	26	11	11	47
Tobacco Manufactories..	62	41	56	50	86	90	155	257	144	156	161
Woollen-cloth ,, ..	53	119	100	157	119	112	137	189	78	71	60
Other Industries, not enumerated above ...	72	63	73	100	155	114	75	61	462	558	606
Total..............	3,229	2,695	1,807	2,372	2,065	2,384	2,404	3,420	3,367	3,686	4,265

Ample field for establishing new factories.

As regards the future, however, a vast field is open for the velopment of manufactures in New South Wales. Producing, it does, the raw material of various kinds necessary for supplying e primary wants of civilization, it is evident that the Colony will t long continue the wasteful process of exporting the raw article d taking it back again in the shape of manufactured goods. The e great cause which has hitherto operated to prevent the larger velopment of manufactures is the abundant employment which s easily been found for labour and capital in other directions, ch as mining, agricultural, and pastoral pursuits. It cannot be ticipated that these fields for investment will always remain en, and capital must then seek other channels.

Manufacture o woollen cloth.

The manufacture of wool into cloth and other articles seems ecially adapted to the circumstances of New South Wales as a ool-growing country; but this industry has made no progress. he following table shows the number of woollen-mills in operation, he number of employés, and the quantity of cloth manufactured :—

Woollen Mills.

Year.	Number of Woollen-mills.	Hands Employed.			Quantity of Woollen Cloth Manufactured.
		Male.	Female.	Total.	
					Yards.
1878	9	145	53	198	480,037
1879	9	157	119	276	415,400
1880	8	114	100	214	353,100
1881	5	178	157	335	358,000
1882	8	266	119	385	319,225
1883	9	260	112	372	352,000
1884	7	175	137	312	305,000
1885	6	134	189	323	337,750
1886	6	104	78	182	324,788
1887	5	101	71	172	348,000
1888	5	117	60	177	241,000

Number of Woollen Mills decreased.

From these figures it will be noticed that the number of woollen-mills in operation has decreased, and that those now at work provide employment for 177 persons only. During the years 1882 nd 1883 more than twice this number of hands were employed, nd even at the beginning of the last decade 276 persons were rovided with work in this branch of industry. The quantity of cloth manufactured, as a necessary consequence, has also co siderably decreased. When, however, it is remembered that th export of wool reached no less a sum than £9,089,776 in 1888 and that wearing apparel to the amount of £1,051,466, blankets £32,871, and vast quantities of other woollen goods, were imported during the same year, the full significance of the small number of persons engaged in the manufacture of woollen cloth will be at once perceived. The quantity of tweed made is that returned by the manufacturers. The great decline in the production during 1888, as compared with the previous years, cannot be reconciled with the slight increase in the number of hands employed, unless on the supposition that the material manufactured was much more valuable, which is improbable, or that the mills worked shorter time than in the year 1887.

Import of woollens.

Manufacture of boots.

The manufacture of boots and shoes exhibits little progress, as may be seen from the table below. It is noteworthy, however that the quantity manufactured has considerably increased, due evidently to the improvement, during the period covered by the table, in the effectiveness of the machinery applied to this industry.

Boot Factories.

Year.	Number of Boot Factories.	Hands Employed.		
		Males.	Females.	Total.
1878	71	1,584	299	1,883
1879	71	1,750	373	2,123
1880	75	2,038	341	2,379
1881	71	1,849	377	2,226
1882	62	1,695	341	2,036
1883	61	1,748	377	2,125
1884	68	1,871	418	2,289
1885	55	1,672	433	2,105
1886	68	1,856	416	2,272
1887	60	1,837	436	2,273
1888	57	1,618	427	2,045

From the above figures it will be noticed that although there is a slight increase in the number of hands—which from 1,883 in 1878 had risen to 2,045 in 1888—yet the number of establishments has considerably decreased. This would indicate a tendency for large factories to supersede small works, and drive the latter out of mpetition in this particular branch of manufacture. The average mber of hands employed in each factory has risen from 26·5 in 78 to 35·9 in 1888. The number of pairs of boots made during e year was 2,559,980, giving an average of 1,250 per head mployed as compared with 1,002 in 1887, and 828 in 1886.

Prospects of iron trade.

What should, in time, form another great staple industry of Australia is undoubtedly the iron trade. Every advantage possessed by the great iron and machinery producing countries of the world—such as England and Belgium—is also present here. Not only are iron and coal deposited in abundance, and in positions easily accessible and readily worked, but, as pointed out on page 88, the local iron ore is exceedingly rich. Scarcely any progress, however, has been made in iron smelting, and nearly the whole stock of pig and wrought iron required for the local manufactories is imported. The other descriptions of metal works, both for smelting and manufacturing, are in a more forward state. Works for the treatment of metals in 1879 numbered 196, in which were engaged 3,438 persons, while in 1888 the number of works had increased to 323, and the hands employed to 8,805, agricultural implement factories not being included in either year. The chief feature in the progress thus exhibited is the large development of smelting works, which in 1879 employed 552 hands in 21 establishments, while now the works number 20, and the hands employed 2,009. There has also been a large increase in the hands employed making or repairing railway motors, carriages, and other appliances, the employes in 1879 numbering 823 and in 1888, 2,521. The bulk of these were employed in the workshops connected with the State railways.

Preparation of raw materials.

As regards the preparation of raw materials, the products of pastoral pursuits, the rate of increase has been not a little affected by the seasons, so that, under the heads of boiling-down, fellmongering, tanning, woolwashing, and allied pursuits, the number of hands employed has only increased from 1,831 in 1879 to 2,338 in 1888, while that of the works has fallen from 253 in 1879 to 193 in 1888.

Breweries.

Beer imported

Brewing and the manufacture of raw and refined sugar are two industries which have increased during the last decennial period, and there can be no doubt that these branches of manufacture will receive further development. As regards the former, in 1879 there were 45 breweries and bottling establishments in the Colony employing 561 hands, while in 1888 the numbers had risen to 71 and 805 respectively. The quantity of ale and beer imported from abroad during 1888 reached a value of £394,309, not a very large amount considering that £287,622 of it was for beer in bottle, which the colonial breweries have, so far, not attempted to produce on any extensive scale. The following table illustrates the position of the brewing and bottling industry and its progress during the last eight years :—

Breweries.

Year.	Number of Breweries and Bottling Establishments.	Hands Employed.	Quantity manufactured Ale, Beer, &c.
			Gallons.
1881	50	637	*
1882	56	699	*
1883	59	747	*
1884	60	788	*
1885	70	805	*11,000,000
1886	74	987	*10,000,000
1887	75	804	9,720,000
1888	71	805	9,300,209

* Only approximately ascertained.

Soap and candles.

Class of candles made.

The making of soap and candles, which may be reckoned a purely colonial production, seeing that tallow is one of the staple products, experienced a satisfactory advance. The number of factories in existence in 1877 was 36, turning out 92,958 cwt. of soap. In 1888 the quantity reached 198,880 cwt. The statistics bearing on the production of candles are not reliable prior to 1885. In the year named the production was 1,683,360 lb., while in 1888 the quantity was 2,216,000 lb. The class of candles made is chiefly stearine, which has now almost entirely superseded the common tallow candle. The value of the capital employed in the year 1888 was £158,548, and the steam developed was equivalent to 503 horse-power.

Soap and Candle Manufactories.

Year.	Number of Soap and Candle Factories.	Hands Employed.	Quantities Manufactured.	
			Soap.	Candles.
			cwt.	℔.
1877	36	173	92,958	....
1878	34	180	77,655	....
1879	34	169	64,524	....
1880	38	203	114,118	....
1881	38	232	106,962	....
1882	40	263	112,513	....
1883	38	220	121,794	....
1884	34	204	131,244	....
1885	40	223	138,849	1,683,360
1886	46	321	155,430	2,199,282
1887	52	367	190,060	2,442,960
1888	59	397	198,880	2,216,000

Saw mills.

The number of persons employed in the various timber districts, saw-mills, &c., has also increased at a good ratio during the last n years. The establishments in 1879 numbered 232, employing total number of 2,072 persons, while in 1888 there were 317 ills, and the number of hands employed was 3,616. The value f capital employed in 1888 was £1,072,003, the horse-power 5,194, hile the quantity of timber sawn was estimated at 185 million eet 1-inch thick.

Saw-mills.

Year.	Number of Saw-mills.	Hands employed.	Year.	Number of Saw-mills.	Hands employed.
1879	232	2,072	1884	376	3,477
1880	243	2,458	1885	415	3,783
1881	280	2,382	1886	323	3,284
1882	334	3,013	1887	322	3,254
1883	370	3,318	1888	317	3,616

Sugar-growing.

The growth of sugar-cane, and the manufacture of sugar there-rom, in the northern districts of the Colony, is now becoming an mportant industry, for though the output of 1888 was much below hat of 1887, when 450,000 cwt. of sugar and 880,000 gallons of nolasses were made, this falling-off was due to damage done by

Number of sugar mills.

Tendency to separate sugar-growing and making.

frost and drought. Since 1887 there has been a considerable inc in the breadth of land under this crop, and the productio 1889 will exceed that of 1888, while that of 1890 should b largest yet recorded. In 1877 the number of mills was 5 which 24 used steam-power, whilst 26 were worked by cattle, the number of workmen employed was 1,065. These incre in the year 1885, to 83 steam-mills and 19 worked by cattle, w the number of men employed, and the quantity of sugar molasses turned out, correspondingly increased; but since the fall in the value of sugar has caused many of the smaller estab ments to be closed, and the cane grown has been to an increa extent sold to the large factories, which pay a price for the but slightly below that given prior to 1885. Almost everyw the tendency to concentrate the manufacture of sugar in central establishments is increasing, and in the West Indies elsewhere small mills are rapidly disappearing to make roo larger establishments, where business is strictly confined t industrial process of sugar making, the planters attending s to the cultivation of the cane.

The following table gives the particulars of the sugar ind for the last twelve years :—

Sugar Mills.

Year.	Sugar Mills.		Horse-power.		Quantity of Sugar Manufactured.	Quantity of Molasses Manufactured.	*H Emp
	Worked by Steam.	Worked by Cattle.	Steam.	Cattle.			
					cwt.	gallons.	
1877	24	26	503	108	150,744	345,543	1,
1878	36	23	627	119	163,203	532,825	1,1
1879	44	21	637	185	153,833	440,506	1,
1880	50	15	1,601	76	146,003	269,092	2,1
1881	59	17	1,432	63	159,048	354,402	1,
1882	70	16	978	49	270,000	560,000	1,
1883	79	14	2,651	44	280,000	580,000	1,
1884	86	12	2,855	50	230,000	450,000	2,1
1885	83	19	2,598	32	369,280	635,000	2,
1886	57	7	2,531	21	275,000	507,000	2,
1887	57	7	2,210	26	450,000	880,000	2,
1888	36	.. ...	1,995	......	225,580	350,000	1,

* Includes hands employed for only portion of the year.

Sugar refineries.

he number of establishments for refining the raw sugar was y two in 1886; and one of these has since been closed. The ntity of refined sugar melted has varied considerably from r to year, but was greater in 1888 than in any former year. sugar treated in the refinery is not wholly the produce of the ony; thus during 1888 of the quantity melted 179,046 cwt. re imported from Queensland and Fiji, the remainder being produce of the Colony, of which a large proportion was ried over from 1887.

Sugar Refineries.

Year.	Sugar Refineries.	Number of Hands employed.	Quantity of Sugar melted.
			cwt.
1877	2	165	259,650
1878	2	153	324,480
1879	2	181	388,480
1880	2	166	414,400
1881	2	222	514,400
1882	2	235	470,000
1883	2	214	468,000
1884	2	172	370,000
1885	2	224	384,000
1886	2	214	510,000
1887	1	200	537,900
1888	1	210	550,149

The numbers given above are only those of the men in constant nployment; in addition there are many others employed for nger or shorter periods discharging ships, storing sugar, and her work incidental to the trade.

Colonial Sugar Company.

In New South Wales, almost from the introduction of the gar-growing industry, the manufacture of sugar has been largely in the hands of the Colonial Sugar Refining Company, whose mills on the Clarence and on the Richmond have been referred to in another part of this work. This company also owns the only sugar refinery in New South Wales, where the produce of their mills in this colony is refined, together with a portion of the output of their factories in Fiji and Queensland. The other establishments, locally known as refineries, whether worked by steam or cattle, are mostly small factories in which sugar of an inferior quality, which has afterwards to undergo the process of refining, is turned out.

Tobacco manufactories.

The use of tobacco manufactured in the Colony has, to a very large extent, superseded that of imported tobacco. The amount of cigars and cigarettes made in the Colony is, on the other hand, very small compared with the total quantity of these commodities consumed. The weight of each description of tobacco used in the Colony during 1888 amounted to—

	Imported.	Made in the Colony.	Total.
	lb.	lb.	lb.
Tobacco	601,360	2,062,380	2,663,740
Cigars	227,783	3,624	231,407
Cigarettes	59,706	8,296	68,002

Imported leaf largely used.

A large amount of imported leaf is used in the manufacture of tobacco in the Colony, the proportion during the past year being 610,485 lb. of imported leaf to 1,463,815 lb. of New South Wales leaf, not including the stalks. The quantities of each kind of tobacco made in the Colony, as well as the weight of leaf used in the manufacture, will be found in the following table. The quantity of leaf given does not include stalks and stems, which are taken out in the process of manufacture. The proportion of leaf not used would be about 20 per cent. of the total weight of leaf.

Year.	No. of Tobacco Factories.	No. of Cigar and Cigarette Factories.	Hands Employed.		Tobacco Leaf Used.		Quantity Manufactured.		
			Males.	Females.	Colonial Leaf.	Imported Leaf.	Tobacco.	Cigars.	Cigarettes.
					lb.	lb.	lb.	lb.	lb.
1885	16	9	411	257	1,476,986	672,485	2,133,168	9,402	6,901
1886	17	9	559	144	1,495,191	561,514	2,044,240	7,125	5,340
1887	13	10	506	156	1,611,527	552,217	2,147,418	6,057	10,269
1888	14	9	554	161	1,463,815	610,485	2,062,380	3,624	8,296

Mills for grinding and dressing grain.

The amount of mill-power for grinding and dressing g ample for treating the flour consumed in the Colony. The n of mills at work and the hands employed have varied sl from year to year, but are now somewhat less than formerl the Colony does not produce sufficient grain for its own re ments, it is not at all probable that there will be any n increase in the number of flour-mills, as those existing are r at work only part of their time. Wind and horse-power, as a to the dressing of grain, have fallen into disuse, and though water-mills still exist, there are not so many as formerl their number is decreasing. Particulars of the mills in ope during the twelve years which closed with 1888 will be in the subsequent table. The approximate quantity of flour in the Colony during the same period is shown in the foll table. During 1888 the output of the local mills reached 1 tons as compared with 65,889 tons imported.

Flour made in the Colony.

Flour Manufactured.

Year.	New South Wales Wheat treated.	Imported Wheat treated.	Total Wheat treated.	Total mad
	Bushels.	Bushels.	Bushels.	Ton
1877	2,209,969	696,973	2,906,942	58,
1878	2,224,650	714,488	2,939,138	58,
1879	3,147,761	390,618	3,538,379	70,
1880	3,321,556	300,620	3,622,176	72,
1881	3,400,934	108,096	3,509,030	70,
1882	3,136,461	629,841	3,766,302	75,
1883	3,733,171	175,138	3,908,309	78,1
1884	3,983,246	418,434	4,401,680	88,0
1885	3,927,273	497,775	4,425,048	88,5
1886	2,402,057	984,773	3,386,820	67 7
1887	4,460,629	233,535	4,694,164	93,8
1888	4,962,594	1,509,656	6,472,250	129,4

Year.	Steam.		Water.		Wind.		Horse.		Total.		Hands Employed.
	No.	Horse-power.	No.	Horse-power.	No.	Horse-power.	No.	Horse-power.	No.	Horse-power.	
1877	151	2,529	8	80	1	10	3	4	163	2,623	623
1878	152	2,577	10	88	1	10	2	2	165	2,677	664
1879	147	2,580	9	84	1	10	4	10	161	2,684	546
1880	140	2,551	7	88	1	10	2	10	150	2,659	566
1881	148	2,806	9	95	1	10	1	2	159	2,913	695
1882	156	2,929	7	72	1	10	2	14	166	3,025	703
1883	145	2,759	9	88	......	......	......	......	154	2,847	685
1884	153	3,109	8	98	......	......	......	......	161	3,207	662
1885	152	3,026	7	66	......	......	......	......	159	3,092	662
1886	128	2,602	5	48	......	......	......	......	133	2,650	571
1887	122	2,721	5	48	......	......	1	12	128	2,781	599
1888	107	2,844	3	33	......	......	......	......	110	2,877	628

WAGES.

Constant demand for labour.

In New South Wales, as in most other Australian Colonies, rapid settlement of the country has created a demand for lab of all kinds, which could not be satisfied except by a const accession of labourers from other countries. This demand, wh has been continuous for many years, has resulted in the establ ment of a rate of wages much higher than is ordinarily found older lands. The wave of depression which affected most co tries during 1885-8 did not leave this Colony untouched, and labouring classes shared largely in the general suffering. Altho the normal rate of wages sanctioned by the various labour org zations showed no decline, the actual amount which workmen w willing to accept in most trades was below these rates. The sli revival of prosperity which appears to have set in has had a be ficial effect, and the following rates may be taken as now curr in the Colony :—

Wages accepted by trades.

Rates of Wages of various Trades, &c., during 1888.

Iron Trades.

*Iron-moulders	8/– to 10/–	per day of 8 hours.
*Boilermakers, shipsmiths	8/– to 10/–	,, ,,
Boilermakers' assistants	6/– to 7/6	,, ,,
*Iron-turners	8/– to 10/–	,, ,,
*Engine-fitters	8/– to 10/–	,, ,,
Blacksmiths	9/4 to 10/–	,, ,,
Strikers	6/– to 7/6	,, ,,
Furnacemen	6/8 to 8/–	,, ,,
*Engine-drivers	36/– to 42/–	per week.
Labourers working with engineers, &c.	5/– to 6/8	per day of 8 hours.
*Pattern-makers	9/4 to 10/–	,, ,,
Iron-workers	8d. to 1/–	per hour.

Brass and Copper Trades.

Brass moulders	9/4 to 10/–	per day of 8 hours.
*Brass finishers	8/– to 10/–	,, ,,
*Coppersmiths	8/– to 10/–	,, ,,

Tin and Galvanized-iron Trades.

Tinsmiths	8/– to 10/–	per day of 8 hours.
Galvanized-iron workers	9/- to 10/–	,, ,,
Black-iron workers	8/– to 10/–	,, ,,

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*Special men receive 1/- per day above current wages.

Building Trades.

sons	10/- to 11/-	per day of 8 hours.
ers	10/- to 11/-	,, ,,
rs	11/-	,, ,,
nen	7/- to 10/-	,, ,,
ers and joiners	10/- to 11/-	,, ,,
	9/-	,, ,,
rs in building trades	8/-	,, ,,
rs	9/- to 12/-	,, ,,
ers	9/- to 10/-	,, ,,
	10/- to 12/-	,, ,,

Brickmakers and Potters.

kers	10½d. to 1/-	per hour.
kers	8/- to 10/-	per day of 8 hours.
	8/- to 10/-	,, ,,
	7/- to 8/-	,, ,,

Coachbuilding Trade.

ilders	8/- to 10/-	per day of 8 hours.
rights	8/- to 10/-	,, ,,
	6/8 to 10/-	,, ,,
rs	8/- to 10/-	,, ,,
iths	8/- to 10/-	,, ,,
iths and wheel-ts	35/- to 60/-	per week, of 9 hours per day.
	35/- to 55/-	,, 8 ,,

Furniture Makers.

makers	8/- to 10/-	per day.
polishers	8/- to 10/-	,,

Miscellaneous Trades.

ghts	11/- to 12/-	per day of 8 hours.
collar, and harness rs	30/- to 50/-	per week of 54 hours.
ers	30/- to 50/-	,, ,,
	50/- to 60/-	,, piece-work.
	50/- to 60/-	,, ,,
	70/- to 80/-	,, first-class hands up to £8 8s.
ters	53/- to 70/-	per week, piece-work.
erers	10/- to 12/-	per day.
	1/3 per hour, or piece-work 40/- to 55/- per week.	

*Coal miners.................	8/- to 12/-	per day of 8 hours
Coal lumpers and trimmers	1/6	per hour.
Wharf labourers..........	1/- per hour day, and	1/6 per hour night
Bootmakers (factory hands)..	25/- to 50/-	per week.
Cooks and pastry-cooks.......	30/- to 60/-	,,
Drapers	30/- to 70/-	,,
Tobacco operatives	25/- to 50/-	,,
Gas stokers	8d. to 1/-	per hour, 8-hour
Sawyers and mill-workers ...	8d. to 1/3	per hour.
Butchers....................	8d. to 1/-	,,
Compositors	piece-work, 1/1 per thousand, day; per thousand, night-work; or 55/- per week, good jobbing hands.	
Navvies	6/6 to 8/-	per day.

Government Railways.

Gangers	9/-	per day.
Fettlers	7/6	,,
Labourers, line repairing ...	7/6	,,
Engine-drivers	11/-, 12/-, 13/-, 14/-	,,
Firemen	8/- to 10/-	,,
Fitters	10/- to 12/4	,,
Cleaners	7/-	,,
Turners and machinists	8/- to 11/8	,,
Blacksmiths	10/- to 14/-	,,
Strikers	7/6	,,
Boilermakers..	9/4 to 12/2	,,
Boilermakers' assistants......	7/- to 7/6	,,
Carriage and waggon builders	9/6 to 11/-	,,
Station-masters..................	£150 to £400	per annum.
Telegraph operators............	£50 to £195	,,
Signalmen and shunters......	7/- to 11/-	per day.
Guards	8/- to 12/-	,,
Porters	7/- to 10/-	,,

Government Tramways.

Conductors..........................	8/- to 9/-	per day.
Cleaners	6/6 to 7/6	,,
Flagmen	7/-	,,
Engine-drivers	12/- to 13/-	,,
Firemen	7/6 to 9/-	,,
Engine-fitters	10/-	,,
Labourers	7/-	,,

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* Mostly paid piece-work. Newcastle collieries hewing rate, minimum, 4/2 5 feet seam; Illawarra, 2/4 to 3/6 per ton for pillar and stall, 2/- to 3/- longwall, seam ranging from 3 feet 6 inches to 6 feet; Western District, Lithgow Valley, 2/4 5 feet 6 inches to 6 feet seam.

Municipal Labourers.

bourers	7/-	per day.
labourers	5/- to 7/-	,,
finding horse and	11/6	,,
rs	7/- to 8/-	,,
n	7/-	,,
	9/- to 14/-	,,

Domestic Servants (including board).

males)	£45 to £65	per annum.
ales)	£52 to £78	,,
ks	£65 to £200	,,
ses	£45 to £52	,,
ids	£30 to £40	,,
ervants	£30 to £40	,,
ids	£20 to £39	,,
nd coachmen	£52	,,

Station Hands (including rations or board).

ouples	£65 to £80	per annum.
ourers	£40 to £52	,,
rivers	£40 to £52	,,
msters	£40 to £65	,,
riders	£40 to £52	,,
	£40 to £75	,,
s	£35 to £45	,,
s	£40 to £52	,,
	£25 to £35	,,
ers, tank-sinkers,	6/- to 8/-	per day.
	20/-	per 100 sheep, without rations.

spection of the preceding table at once reveals the fact labouring classes in this community are far in advance of low-workmen in older countries, in other respects, besides question of better wages. In nearly all departments of he daily toil is restricted to eight hours, and though there tutory recognition of this time as the limit of a man's t is tacitly acknowledged even by the Governments of the colonies. Labour organizations and trades' unions are rly strong in the two provinces of New South Wales and Every year a day is set apart in these colonies by les and Labour Councils for the public celebration of the on of the eight-hour system; and the State countenances onstration by making the day a public holiday.

Comparatively high rate of wages.

Eight-hour system generally adopted.

Average wages since 1830.

In the following table are given the average wages paid to mechanics, farm labourers, and domestic servants over a series of years—the wages of the two last-mentioned being in addition to food and lodging. The period embraced in this statement covers sixty years—from the days when Australia was a penal settlement down to the present time. The wages of mechanical trades are those of carpenters, bricklayers, masons, wheelwrights, smiths, and in some years of plasterers, and represent, not the wages of any particular trade, but the average of all trades, due allowance being made for the importance of each.

Average Wages paid during each year since 1830.

Year.	Building Trades. Mechanics.		Farm and other labourers, provided with food and lodging.			Female servants, provided with food and lodging.			Year.	Building Trades. Mechanics.		Farm and other labourers, provided with food and lodging.			Female servants, provided with food and lodging.		
	Per day.		Per annum.			Per annum.				Per day.		Per annum.			Per annum.		
	s.	d.	£	s.	d.	£	s.	d.		s.	d.	£	s.	d.	£	s.	d.
1830	6	6	....			....			1863	9	10	32	10	0	25	0	0
1833	6	6	18	0	0	12	0	0	1864	9	4	29	0	0	25	0	0
1836	7	0	....			....			1865	9	4	29	0	0	23	0	0
1839	7	3	....			....			1866	9	4	29	0	0	23	0	0
1840	8	3	....			....			1867	9	4	29	0	0	23	0	0
1841	8	9	....			....			1868	9	4	29	0	0	28	0	0
1842	8	3	22	0	0	14	0	0	1869	8	6	31	10	0	26	0	0
1843	6	0	22	0	0	12	0	0	1870	9	6	32	10	0	28	0	0
1844	4	0	15	0	0	12	0	0	1871	9	9	28	0	0	23	0	0
1845	4	0	18	0	0	16	0	0	1872	10	9	32	10	0	26	0	0
1846	5	2	20	0	0	16	0	0	1873	10	0	32	10	0	28	0	0
1847	5	6	23	0	0	18	0	0	1874	10	3	32	10	0	28	0	0
1848	5	3	21	0	0	16	0	0	1875	10	3	32	10	0	32	0	0
1849	4	9	17	10	0	12	0	0	1876	10	3	32	10	0	32	0	0
1850	4	6	17	10	0	13	10	0	1877	10	6	40	0	0	32	0	0
1851	6	9	20	0	0	16	0	0	1878	10	6	40	0	0	32	0	0
1852	9	0	27	10	0	17	0	0	1879	10	6	37	10	0	32	0	0
1853	14	3	28	10	0	18	0	0	1880	10	0	37	10	0	32	0	0
1854	17	3	31	10	0	27	10	0	1881	10	0	37	10	0	35	0	0
1855	16	0	35	0	0	23	0	0	1882	11	0	46	0	0	35	0	0
1856	13	0	35	0	0	22	0	0	1883	11	0	46	0	0	35	0	0
1857	13	0	35	0	0	22	10	0	1884	11	0	46	0	0	35	0	0
1858	10	6	40	0	0	25	0	0	1885	11	0	46	0	0	35	0	0
1859	10	0	35	0	0	22	10	0	1886	10	0	46	0	0	35	0	0
1860	10	3	35	0	0	21	10	0	1887	10	0	46	0	0	34	0	0
1861	10	6	35	0	0	22	10	0	1888	10	0	46	0	0	34	0	0
1862	10	9	35	0	0	25	0	0	1889	10	6	46	0	0	34	0	0

Natural wages periods.

ıe years in the foregoing table are naturally divided into six ıds, the first being that prior to 1836, when the element of d convict labour materially interfered with the wages paid ee labourers; the second period, during which the system of ning convict labour to free settlers was abolished, extends to , when the great commercial crisis occurred, of which the ıg of the Bank of Australia was a notable incident; the third ıd from 1843 to 1851 was the most depressed in the history he Colony, but was summarily changed by the discovery of , the particulars of which have already been related in another of this volume.

rom 1851 to 1857 the Colony passed through the enormous tement of the gold rush; from 1857 to 1871 was a time of sition from the golden dreams of the fourth period to the em of employment which now obtains. The following is a ement of the average wages of each class during these periods.

Average Wages of Mechanics and Servants.

Period.	Average daily wages of Mechanics in Building Trades.			Annual Wages with food and lodging.					
				Farm and other labourers.			Female Servants.		
	£	s.	d.	£	s.	d.	£	s.	d.
ır to 1836	0	6	6	18	0	0	12	0	0
6 to Great Commercial Crisis in 1843	0	7	9	22	0	0	14	0	0
3 to Discovery of Gold in 1851	0	4	9	19	0	0	15	0	0
1 to 1857 Gold rush	0	13	0	30	0	0	20	10	0
7 to 1871	0	9	9	32	0	0	24	0	0
1 to 1888	0	10	4	39	0	0	34	0	0

Improvement in style of Living.

Prior to 1836 labourers were largely emancipated convicts, ıose wages were determined by a low standard of living; from ıt year there was a marked tendency for wages to increase, first obedience to an increase in prices, and also because the type of bourers and the general style of living had bettered. The mmercial crisis which supervened in 1843, very disastrously affected the wage-earner, depriving him of constant employment, and undoing much of the progress of the preceding years. The gold rush in 1851 and the following years brought an entirely new type of labourer to the Colony, and the liberal wages and consequent improved standard of living which soon became the rule have beneficially affected labour ever since. The figures in the table just given however show but one aspect of the case. It remains to be seen how the cost of food and articles of ordinary consumption compare with the wages during each period. This may be gathered from a statement of the average prices and wages; those since 1871 being made the standard.

Beneficial effect of gold rush.

Food and Wages Level on the basis of prices from 1871 to 1888.

Period.	Price Level of common articles of consumption.	Wages Level.		
		Mechanics.	Farm and Station Hands.	Female Servants.
Prior to 1836	106	63	46	35
1836 to 1843	116	75	56	41
1843 to 1851	86	46	46	44
1851 to 1857	152	126	77	60
1857 to 1871	113	94	82	70
1871 to 1888	100	100	100	100

Nominal and real wages compared.

The wages referred to in the preceding table are the actual money wages; the amount of real wages or the purchasing power of the money wages yet remains to be stated. This affords the only true standard by which the prosperity of different times can be adequately gauged. For convenience the wages of mechanics only are given.

Real and Money Wages Compared.

Period.	Level of Money Wages.	Level of Real Wages.
Prior to 1836	63	60
1836 to 1843	75	65
1843 to 1851	46	53
1851 to 1857	126	83
1857 to 1871	94	82
1871 to 1888	100	100

Movement in wage-prices.

From whatever point it be viewed, the worst series of years is that from 1843 to 1851, the money wages then paid being less than half the present rate, while the real wages were scarcely more satisfactory. This period which was one of untoward misfortune, gave place to the stirring times accompanying the discovery of gold, when money wages rose more than 200 per cent., and at one time averaged 75 per cent. more than wages now current. Nevertheless the period from 1851 to 1857, though so much in advance of anything previously experienced in the colony, was little better, in point of real wages, than the period which immediately succeeded, and was certainly much behind that which has elapsed since 1871. This may appear strange in view of the high wages which were paid during the gold rush, but the advance then occurring was attended by a considerable if not a commensurate increase in the price of necessaries; while since 1871 the rates of wages, and the cost of living, have moved in opposite directions, so that the condition of mechanics since the year named has been better than at any former period of the colony's history.

Improvement in condition of farm servants, &c.

The improvement in the lot of farm and station labourers and female servants is still more marked. The rise in wages of male hands has, excepting the period 1843-51, been continuous, while the increase in the pay of females has suffered no interruption even during the disastrous years preceding the gold discovery. Coincident with the rise of nominal wages which these various tables exhibit, there has been a marked advance in the standard of living of the working population of the colony, an advance even more rapid than that of wages. The cheapening of many articles of food and dress which has taken place of late years, without a corresponding fall of wages, has enabled the homes of the bulk of the population to be made more comfortable. The acquisition of comforts begets the desire for further comforts, and it is therefore unlikely that any fall in wages will be assented to, which will necessitate the labouring classes decreasing the standard of living they now enjoy; on the contrary it is more than probable the

Standard of living.

standard will be still further raised. In this connection it m be pointed out that the evidence of the savings' banks of colony cannot be taken as conclusive of the prosperity or depressi of the working population, for if the standard of living indul in be raised more rapidly than the rate of wages, it is obvious t the margin out of which savings are made will be decreas although the actual condition of the masses may be materia advanced.

GOVERNMENT EMPLOYÉS.

The Government of the Colony is a considerable factor in labour markets, as it directly employs 25,450 persons a indirectly, through its contractors, a number varying from 8,0 to 22,000 men, so that the State may be said to provide empl ment for about 40,000 persons. The permanent employés may classified as under :—

Civil Service	3,400
Public Schools	3,913
Military	600
Police	1,522
Railways and Tramways	11,320
Other employés..	4,695
	25,450

Percentage of State employed.

Of the number given above 22,810 are males and 2,640 femal so that out of the whole male population of the Colony above t age of 16 years 6 per cent. are in the employ of the State, wh of females the proportion is about 1 per cent. It will be s that about half the State employés are in the service of t Railway Commissioners, 2,240 being engaged in manufacturi or repairing work, while 9,080 are employed working the tra or keeping the lines in order. At the close of 1888 the m employed on public works numbered 8,220, of whom 1,600 w on railway works, 4,900 making roads and bridges, and 1,720 harbour and river improvement and other public works. T average employed on similar works during the past five yea however, very greatly exceeded the number at the close of 1888. Upon road works the average number of men employed is 5,980, the total sometimes mounting above 9,000. The construction of the Sydney Water Supply works gave employment for nearly 2,000 men during about five years. These works are nearly completed, and few labourers are now required. Railway construction, which had afforded for 9,810 men in 1885, has now practically ceased, the decrease being very rapid since the year named, as the following statement shows :—

Important public works completed

Year.	Average number of men employed.	Amounts paid to Contractors.
		£
1883	7,278	1,222,000
1884	9,163	1,588,000
1885	9,810	1,677,000
1886	7,470	1,451,000
1887	3,671	862,000
1888	1,606	488,000
*1889	504	60,000

* To the end of March, including retention money paid to contractors on completed contracts.

It is possible that the number of men employed by contractors for public works was less by 12,000 at the middle of the year 1889 than in 1885. The greater part of this large body of labourers were suddenly thrown out of employ on the completion of the works, and it is scarcely to be wondered at that the labour market was greatly disturbed, especially during 1886 and 1887. To mitigate the distress consequent on the inability of the community to rapidly absorb so much labour relief works were started by the State and an expenditure of £387,000 incurred thereon. These works have now for the most part been abandoned or completed.

Employés of contractors.

STEAM POWER.

The power used in the Colony for manufacturing, transporting, and other purposes is equivalent to 113,600 horse-power, or 104 horse-power for every thousand persons, a rate comparing not unfavourably with other countries, as will be seen from the su joined statement computed from Mulhall's Dictionary of Statisti

Country.	Steam power employed.	Per 1,000 of th populatio
	H. P. thousands.	
United Kingdom	7,780	214
France	3,513	92
Germany	4,325	42
Russia	1,365	15
Austria	1,280	34
Italy	480	16
Spain	483	29
Belgium	595	102
Holland	216	50
United States	8,152	162
New South Wales	114	104

Value of machinery.

Of the total power employed in the Colony, by far the greate portion is derived from steam. The amount used in manufa tories is 26,400 horse-power, or about 25 per cent. of the tota employed, and the value of plant and machinery worked by thi power is estimated at £5,892,000. The value of land an buildings devoted to works and manufactories may be approxi mately set down at £9,544,000, which, with the sum set dow for plant, would make the total invested in these industries a £15,436,000 for plant, land, and buildings.

The services for which steam power is used are shown in th following table, from which it will be seen that land transpor absorbs 53,760 horse-power, and harbours and rivers transport 20,300 horse-power, in all 74,060, or 66 per cent. of the total horse-power consumed.

Industries employing power.	Horse-powe
Manufactures, works, &c.	26,400
Land transport	53,760
Harbour and River transport	20,300
Other industries using power	13,140
	113,600

PATENTS.

e law relating to the registration of inventions and improve-s has been in force since 1855, but it is only within recent that the provisions of the Act have been used to any great t. In 1887 the law was amended, and the fees reduced to ominal sum of £5 for Letters Patent, and £2 for a certificate ovisional protection, which latter may, if application be made n twelve months from its granting, be converted into a patent e payment of an additional £3. The result has been that usiness of the Patent Office has greatly increased. The tions registered in 1888 were for the most part not local but n, and this feature has marked the operations of the Patent since its inception. The following is the business transacted 1855.

Liberality of the law.

rs of Registration and Assignments thereof for Inventions or Improvements registered.

r.	No. of Registrations.			Year.	No. of Registrations.		
	Patents.	Assign-ments.	Total.		Patents.	Assign-ments.	Total.
5	......	......	3	1872	43	5	48
6	......	......	1	1873	43	6	49
7	......	......	1	1874	39	21	60
8	......	......	10	1875	34	16	50
9	......	......	11	1876	44	18	62
0	......	......	10	1877	62	27	89
1	......	......	13	1878	45	19	64
2	......	......	14	1879	57	16	73
3	18	4	22	1880	89	23	112
4	15	2	17	1881	113	13	126
65	15	5	20	1882	129	21	150
66	20	5	25	1883	149	24	173
67	20	4	24	1884	183	29	212
68	21	2	23	1885	161	27	188
69	27	5	32	1886	203	31	234
70	32	4	36	1887	*545	44	589
71	27	5	32	1888	*742	50	792

* Provisional protection and letters patent.

he new law came into force on 31st July, in 1887. The nber of certificates of Provisional Protection and Letters

Operations of Act of 1887.

Patent applied for during 1888 was 225 and 517 respectively, while 50 assignments were registered during the same period. The countries from which applications for Patents in New South Wales were received, were as follows:—

Great Britain	107	Canada	7
Germany	12	Cape of Good Hope	1
France	8	New South Wales	322
Sweden	4	New Zealand	43
Austria	1	Queensland	14
Belgium	1	South Australia	27
Russia	3	Victoria	144
United States	46	Tasmania	1
Hawaiian Islands	1		

Making a total of 742 applications, about 43 per cent. of which were made by persons residing in the Colony, though not necessarily for inventions perfected in New South Wales.

COPYRIGHT.

The Copyright Act in force in this Colony was passed on 14th May, 1879, and became law on 1st July, 1879. The Act is divided into four parts, dealing with the following subjects:—Part I. Literary, Dramatic, and Musical Works; Part II. Fine Arts; Part III. Designs; Part IV. Miscellaneous Provisions.

Registration of books, &c.

Part I provides for the registration of copyright in books or publications, as understood in the widest sense of the term, and for every new edition containing any alterations in the matter; and also for the registration of playright, or the right of representing or performing dramatic or musical productions, whether previously printed and published or not. The copyright granted in this Colony applies only to works first published here, and commences to run on first publication, representation, or performance; but no remedy can be obtained or legal proceedings taken for anything lone before registration. The term of protection is 42 years, or he life of the author plus 7 years, whichever is the longer period. Nothing blasphemous, seditious or libellous is entitled to be registered, nor any mere advertisement. Literary works for which registration is sought must be submitted to the Registrar in a complete state as published; but dramatic or musical works may be in manuscript, and will be returned. A best copy of the first and each subsequent edition of every printed "book" published in the Colony must be delivered within two months of publication to the respective Librarians of the Free Public Library and of the Library of the University of Sydney. The penalty for default in delivering Library copies is the forfeiture of the value of the book nd a sum not exceeding £10. Library copies must be delivered hether the book is registered or not. Lectures receive protection ithout being registered, on compliance with the requirements of he Act; but lectures are public property if delivered in any niversity, Public School, or College, or on any public foundation, r by any individual, by virtue of, or according to any gift, endowent, or foundation. The registration fee is 5s. and the fee for ertificate, if one be required, 3s.

Period of copyright.

Part II gives copyright in paintings, drawings, works of sculpure, and engravings, including the design thereof, for 14 years, nd in photography and the negatives thereof, for 3 years. The ees to be paid are:—1s. for photographs and chromographic ards, 5s. for other subjects, and 3s. for certificates. Copyright in a work of fine art when not executed under commission does not necessarily either follow the work or remain with the artist, but ceases to exist, unless it has been secured by agreement between the parties at or before the time of the sale of the original. The work must be made in the Colony, and be new and original to entitle it to copyright.

Copyright in paintings, &c

Part III. Under this part of the Act protection can be obtained for new and original designs, not previously published in the Colony or elsewhere, such designs being for articles of manufacture

Copyright in designs.

and works of art, whether intended for works of utility, ornament, or otherwise. The protection does not extend to the article itself but only to the design thereof; consequently it does not apply to any mechanical action, principle, contrivance, application, or adaptation, or to the material of which the article is composed. The articles which are capable of being registered are divided by the Act into fourteen classes, two years protection being assigned to some, and three years to others. The registration fee is ten shillings, and registered designs must bear a registration mark.

Part IV contains general provisions, and amongst other matters declares copyright to be personal property, assignable at law, and transmissible by bequest, and subject in case of intestacy to the same law of distribution as other personal property.

International copyright.

The Copyright Law of England is comprised chiefly in some fourteen Acts of Parliament, of an unusually obscure and conflicting character, and extensively elaborated by judicial decisions. Under the "International Copyright Act, 1886," 49 & 50 Vic. c. 33, the greater part of this body of law, together with the terms of the Copyright Convention of Berne, is made reciprocally applicable to Great Britain and each of its Dependencies, and to the countries that are parties to the Convention, with their Colonies, namely:—Germany, Spain, France, Great Britain, Häiti, Honduras, Italy, The Netherlands, Sweden and Norway, Switzerland, and Tunis,—previous copyright treaties being for the most part abrogated.

Effect of international copyright.

Under this arrangement, copyright, when registered in the country of origin, is covered by the local laws within that country, and by the Imperial Laws and the convention elsewhere. Thus, in order to secure international and intercolonial protection for a copyright registered in this Colony, it is only necessary to obtain an International Certificate executed by the Registrar and confirmed by the Minister of Justice, and this may be used anywhere within the province of the Union.

The total number of registrations of copyright effected has en :—

	During 1888.	From the passing of the Act in 1879 to 31st December, 1888.
RT I. *Literature* :—		
Printing and publishing right—		
Books	36	242
Periodicals	28	121
Music	1	32
Playright—		
Drama	5	43
Music	1	3
Total	71	441
RT II. *Fine Arts* :—		
Painting	....	2
Drawing	3	30
Sculpture	.. ..	7
Engraving	6	113
Photography	21	493
Total	30	645
RT III. *Designs, &c.*	16	310
Grand Total	117	1,396

PART XV.

Internal Communication.

FOR many years, settlement was restricted to the narrow
of land shut in between the Blue Mountains and the
Several main roads were formed through this country within
years after the first settlement of the Colony. These roads
nected the infant towns of Parramatta, Liverpool, Windsor,
Penrith with the metropolis, and were constructed entirel
prison labour. The abrupt wall of sandstone rising on
further side of the Nepean barred all access to the interior o

Bass's attempt to cross the mountain range.

country. As early as the year 1796 George Bass made an att
to cross the mountain range, and returned after an unsucce
journey, reporting that it was impossible to find a passage
for a person on foot. In 1813, a protracted season of dro
attended by considerable losses amongst the stock, brought
very clearly to the settlers the conviction that the future o
Colony entirely depended upon the discovery of an extensi
grazing land, beyond the narrow limits within which they

Blaxland, Wentworth, and Lawson discover a passage.

then hemmed. In the month of May of the year named, Gre
Blaxland, W. C. Wentworth, and Lieutenant Lawson once
attempted to find a passage across the mountains. After me
with difficulties which seem astonishing enough to the pre
generation, who have seen a railway carried over the same t
by which Bathurst may be reached in a few hours, these ge
men succeeded in opening a way—sometimes by creeping thr
dense forests, at others by scaling tremendous precipices—to
vast plains lying west of the great Cordillera of Australia.
returned on the 6th June, and shortly afterwards Gove
Macquarie sent a party of surveyors, under Mr. Evans, to re

on the practicability of making a road, and the report being favourable, the construction of the great western highway was at once commenced, the work being performed by gangs of prisoners. The track thus made formed a continuation of the great Western Road, from Penrith, and it was completed as far as Bathurst by the 21st January, 1815.

Construction of the Great Western Road.

The discovery of the Bathurst Plains, and the completion of the mountain road, gave so great an impetus to settlement that it was found impossible to keep pace in the matter of roads with the demands of the settlers. The Government, therefore, contented itself with maintaining the roads already constructed, and extending them in the direction of the principal centres of settlement. For many years these main roads were the only ones which received attention. This would perhaps have been otherwise had the progress of settlement subsequent to 1850 been similar to that of the years previous to that date. Such, however, was not the case. The gold discovery entirely altered the circumstances of the Colony, and during the period of excitement and change which followed that remarkable event, so many new roads were opened, and so large an increase in traffic occurred, that the general condition of the public highways was by no means good. The Roads Department was formed as far back as 1857, and, although good service was done by the road pioneers before that date, the modern system of roadmaking may be said to have begun with the creation of the department. It was not, however, until 1864 that the whole of the roads, both main and subordinate, received attention at the hands of the State.

Impetus to road-making.

The principal main roads of the Colony are:—

Principal main roads.

Northern Road—length, 405 miles, from Morpeth to Maryland, New England.

Western Road—length, 338 miles, from Sydney to Warren through Bathurst, Orange, and many other important townships; thence prolonged to the Darling, at Bourke, by a line 175 miles in length.

Southern Road—length, 385 miles, from Sydney to Albury. This road was, before the construction of the railway, the great highway between Sydney and Melbourne.

South Coast Road—length, 250 miles. This road, after leaving Campbelltown, ascends the coast range, along the top of which it runs as far as Coal Cliff. It then traverses the Illawarra district, parallel to the coast, and passes through the rich lands watered by the Shoalhaven, Clyde, and Moruya, as far as Eden, at the southern limit of the Colony.

Importance of main roads less than formerly.

None of these roads have now the importance they formerly possessed. The railways of the Colony for the most part follow the direction of the main roads, and attract to themselves nearly all the through traffic, so that the tendency is to turn the roads towards the railways, and not run them in the same direction, as was formerly the case.

Government expenditure on public roads.

The expenditure by the Government upon the different roads varies considerably according to their importance. All roads maintained by the Government fall under six classes. On first-class roads the Government expends yearly an amount equal to £50 per mile; on second-class roads, £25 per mile; third-class, £15 per mile; fourth-class, £10 per mile; fifth-class, £7 per mile; and on sixth-class roads, £5 per mile.

Supervision and maintenance of roads.

The network of roads spread over the face of the Colony is divided, for purposes of maintenance, into road districts and road trusts. There are fifty-four road districts, managed locally by superintendents, who have the greater part of the road communication of the Colony outside the municipal boundaries, under their care. The road trusts number 400, and have the supervision of certain grants for the maintenance of roads in districts chiefly of minor importance. There are, however, certain important roads in the vicinity of the metropolis governed by trusts. The length of roads in charge of superintendents or road engineers is approxi

Length of roads.

mately 24,000 miles, while about 4,000 miles are under road trusts. The length of road which has been formed, metalled, and gravelled is not less than 6,500 miles. There are also 4,500 miles of roadway not indeed metalled, but which have been drained, and on which all necessary culverts have been constructed. Four thousand miles have also been cleared and partly graded, while 7,600 miles of road wind their way through the forests of the interior, chiefly along the lines marked out by the cart-wheels of the foremost ettlers, and form, in dry weather, adequate means of communication or the settlers, although it must be acknowledged that in seasons f rain these roads are not unfrequently impassable. Besides the oads mentioned above, there are 1,400 miles of mountain passes. Many of the passes presented the most formidable difficulties, and heir construction reflects great credit upon the engineering skill of he officer who has for so many years designed and supervised the onstruction and maintenance of the roads and bridges of the Colony.

Bridges and culverts.

Punts and ferries.

Many of the earliest bridges erected in the Colony were of stone, and are still existing. Those erected in the period following the extension of settlement to the interior were chiefly of timber, and have since been replaced, after a life of about twenty-five years. Nearly all the large bridges of recent erection are of iron or steel, and some of them have been erected under engineering conditions almost unique, owing to the peculiarity of the river flow in some parts of the country. Including the large culverts, which are in reality small bridges, there are altogether 10,000 bridges, covering a length of 64 miles, while there are also over 54 miles of minor culverts, formed of earthenware piping, from 12 to 24 inches in diameter. Where the traffic has not warranted their construction, or where local circumstances have rendered them unavoidable, punts or ferries have been used instead of bridges. There are 92 punts, 7 of which are propelled by steam, and 85 by hand gear, along wire ropes. The number of boat ferries is 57.

Value of roads and bridges.

The use of roads as the main arteries along which traffic from the metropolis to the interior flows has been superseded by the railways; but the roads remain not only the sole means of communication throughout a large part of the interior, but most valuable feeders to the railway system of the country. No revenue is directly derived from roads, but the indirect advantages to the country have been very great, and after the lands and the railways they form the largest item of national property. It is estimated that £11,676,195 have been expended on roads and bridges since 1857, and the present value to the State, allowing for depreciation, cannot be less than £9,000,000. Their indirect value cannot be calculated, but as an instance of the change brought about by the system of road construction, it may be mentioned that, after the organization of the Roads Department on its present basis, the cost of carriage of goods by road and the time of transit was reduced by more than one-half, as will appear from the following statement:—

Indirect value.

Main Roads.	Distance.	Carriage by Road, 1857.		Carriage by Road, 1864.	
		Days of transit.	Cost per ton.	Days of transit.	Cost per ton.
			£ s. d.		£ s. d.
Sydney to Goulburn	134	17½	12 5 0	7½	3 15 0
,, Bathurst.........	145	23½	15 10 0	11	6 10 0
Newcastle to Murrurundi..	119	21	9 0 0	8	6 10 0

Cost of carrying goods by road and rail.

The progress exhibited in these seven years is very great, and it is possible that the cost of carriage on roads was still further reduced before they were superseded in importance by the railways of the Colony. The average cost of carrying 1 ton of goods 1 mile in the year 1864 was about 7½d.; in the year 1872, the first for which the figures are available, the average cost per mile of carriage on railways was 3·61d. per ton, since which year the rates have been as follows:—

1872............	3·61d.	1880........ ..	2·32d.
1873............	3·28d.	1881...........	2·29d.
1874.....	3·00d.	1882............	2·13d.
1875............	3·07d.	1883........ ...	1·96d.
1876..	2·82d.	1884.......... ..	1·90d.
1877............	2·68d.	1885............	1·86d.
1878............	2·44d.	1886............	1·81d.
1879............	2·25d.	1887............	1·81d.

Saving effected by railways.

saving shown in this table is enormous. The whole volume ds carried over the railways of the Colony during last year quivalent to about 197 million tons carried 1 mile, and ving between the rates of 1864 and 1888 for this amount ffic would exceed £4,670,000, or 9 per cent. of the total e of the Colony, and is thrice the revenue received for the ge of goods. What the saving to the Colony by the sion of the railways to the interior has actually been must n a matter of speculation, but the figures just given may be as indicating how large and beneficial an effect railways have production, and how greatly they must benefit the general mer.

Expenditure on roads.

total expenditure on account of roads of all classes during was £736,006; this sum, however, includes expenditure on approaches, and similar works incidental to the road traffic country.

Expenditure for Construction and Maintenance of Roads and Bridges.

ar.	Expenditure by Roads Department.	Expenditure by Trustees.	Total.
	£	£	£
78	497,032	24,280	521,312
79	649,774	25,428	675,202
80	614,709	28,800	643,509
81	484,567	23,186	507,753
82	577,212	24,722	601,934
83	613,847	24,938	638,785
84	750,584	27,722	778,300
85	800,962	24,404	825,366
86	628,379	28,414	656,793
87	721,994	45,433	767,427
88	706,006	30,000	736,006

Municipal roads and streets.

ides the roads maintained by the Government there existed, close of 1888, 5,020 miles of roads and streets belonging to, aintained by, the municipalities of the Colony. Of these 2,553 miles were regularly formed and metalled, while miles were not formed. The value of these roads is estimated at £3,791,380; but this estimate must be looked up as an approximation only, since the information obtained from th various municipalities is far from complete.

RAILWAYS.

The first attempt to introduce into New South Wales th blessings of railway communication, which has so revolutionised the commerce of the older parts of the world, was made in 184 On the 26th August of that year a meeting was held in Sydney at which it was decided to survey a line to connect the metropolis with the city of Goulburn. Two years afterwards, on 11th September, 1848, the Sydney Tramroad and Railway Company was formed, with a capital of £100,000, having for its object the construction of railways to Parramatta and Liverpool, with possible extension, in course of time, to Bathurst and Goulburn.

The Sydney Tramroad and Railway Company.

No time was lost in breaking ground, and on the 3rd July, 1850, the Hon. Mrs. Keith Stewart, daughter of the Governor, Sir Charles Fitzroy, turned the first sod of the first railway constructed in the Australian Colonies.

Railways transferred to State.

The affairs of the Sydney Tramroad and Railway Company did not, however, prosper as the promoters had expected, and it was found necessary to transfer the property of the company to the Government of the Colony. Meanwhile another company had been started in 1853, with the object of constructing a railway from the city of Newcastle to Maitland. It met with no more success than the Sydney company, and shared the same fate. On the Government taking possession of the property of the defunct companies, the works were carried on with more vigour, and on the 26th of September, 1855, the line from Sydney to Parramatta was declared open for public traffic, and the extension to Goulburn was opened on the 27th May, 1869.

The first line from Sydney to Parramatta.

The progress of railway construction during the twenty years which followed the opening of the first line was very slow, for in he length of the lines in operation had only reached 437 or at the rate of 21·85 miles per year. Not a single mile way was opened during 1865 and 1866; but in 1867 the iction of these great commercial highways received a new is, and continued to increase yearly until 1872, when it still for another period of two years, during which only 5 of railway were thrown open to traffic. In the last twelve of the period of thirty-three years that has elapsed since the ne was opened, the rate of increase in the construction of lines eatly improved, and from the end of 1876 to the close of the 1888, 1,616 miles of railway were opened for traffic, or a average of 134½ miles. The following table shows the er of miles of line opened in each year, as well as the total in operation.

Progress of railway construction.

igth of Railway Line opened for Traffic during each Year.

r.	Opened per annum.	Total opened.	Year.	Opened per annum.	Total opened
	Miles.	Miles.		Miles.	Miles.
5	14	14	1872	40	398
6	9	23	1873	5	403
7	17	40	1874	nil.	403
58	15	55	1875	34	437
59	nil.	55	1876	72	509
60	15	70	1877	89	598
61	3	73	1878	90½	688½
62	24	97	1879	46	734½
63	27	124	1880	115	849½
64	19	143	1881	146	995½
65	nil.	143	1882	273	1,268½
66	nil.	143	1883	52	1,320½
67	61	204	1884	298	1,618½
68	43	247	1885	114	1,732½
69	71	318	1886	157	1,889½
70	21	339	1887	146½	2,036
71	19	358	1888	89	2,125

Extension of railway facilities.

The progress of the accommodation afforded by the Railways of the Colony can be fairly gauged by comparin number of persons at different periods to each mile of line for traffic, and the number of train miles per inhabitants. in 1878, there were 977 persons to each mile of line, but in following ten years the work of construction was so muc excess of the increase of population that the proportion per had fallen to 511 persons, so that the facilities afforded the railways are now nearly twice as great as in the year named. The increase in the number of train miles per inhabit was very rapid from 1878 to 1883, rising from 4·05 to 7·11, w should appear to be as high as the traffic of the Colony un present circumstances can be expected to require for its effec working, and has only once been exceeded. The following st ment illustrates the extension of railway facilities during past eleven years.

Population to each mile of Railway and train miles per inhabitants on Government Lines.

Year.	Population to each mile of line.	Number of train miles run.	Number of tra miles run per h of Populatio
1878	977	2,655,176	4·05
1879	967	2,932,463	4·24
1880	874	3,239,472	4·46
1881	783	3,923,929	5·16
1882	639	4,851,127	6·10
1883	649	5,937,261	7·11
1884	559	6,403,041	7·26
1885	553	6,638,399	7·10
1886	530	6,479,265	6·61
1887	513	6,472,017	6·33
1888	511	7,333,920	6·89

Private lines.

rivate lines of railway, 45 and 36 miles in length respec-
ere in operation during 1888, connecting the important
f Moama and Deniliquin, and Silverton and Broken Hill.
t-named line virtually forms an extension of the Victorian
system from Melbourne to Echuca. Some facts relat-
the traffic of these lines will be found in another place.
lowing figures relate only to lines under Government

Capital expended.

apital expended on all lines at the close of 1888 amounted
663,431 ; of this sum £26,630,664 was for lines opened
fic. The amounts expended on lines opened during each
m the commencement of the railway system will be found

Capital expended on Lines open to Traffic.

.	Capital expended on lines open.	Year.	Capital expended on lines open.
	£		£
5	515,347	1872	6,388,727
6	683,217	1873	6,739,918
7	1,023,838	1874	6,844,546
8	1,231,867	1875	7,245,379
9	1,278,416	1876	7,990,601
0	1,422,672	1877	8,883,177
1	1,536,032	1878	9,784,645
2	1,907,807	1879	10,406,495
3	2,466,950	1880	11,778,819
4	2,631,790	1881	13,301,597
5	2,746,373	1882	15,843,616
6	2,786,094	1883	16,905,014
7	3,282,320	1884	20,080,138
8	4,060,950	1885	21,831,276
9	4,681,329	1886	24,079,555
0	5,566,092	1887	26,554,357
1	5,887,258	1888	26,630,664

New South Wales has greatest length of line.

The Colony of New South Wales stands at the head o Australasian Colonies in regard to railway development, as wi seen from the following table.

Length of Line open for Traffic in Australasian Colonies—1

	Miles.
New South Wales	2,206
Victoria	2,191
New Zealand	1,861
Queensland	1,931
South Australia	1,500
Tasmania	485
Western Australia	257
Total	10,431

In the case of two of the colonies, New South Wales and Zealand, the above figures include the length of private lin operation.

Railway systems of Colony—Southern lines.

The railway system of the Colony is divided into three dis branches, each representing a system of its own. The sout system, including the principal line in the Colony, branche Junee, and places the important district of Riverina, as as the town of Hay in one direction, and Jerilderie in ano in direct communication with Sydney—from which they distant 454 and 412 miles respectively. From several points of the line branches connecting other important dis with the metropolis have been opened for traffic, or are in co of construction. At Cootamundra, a line has been laid d which now reaches Gundagai, whilst from Murrumburrah a has been constructed which connects Blayney on the western with the southern and western systems of New South Wales ways. This practically enables direct railway communicatio be made between Melbourne and Bourke, the capital of Ce Australia; and the branch line has been found of much benef allowing the direct shipment of stock from the pasture groun the Victorian markets. Nearer Sydney the important tow Goulburn will be the centre of a system of branch lines, on which, that from Goulburn to Cooma, is already built, and brings the rich pastoral district of Monaro in direct communication with Sydney. It is also intended to connect Goulburn with the township of Crookwell, the centre of a large agricultural district 25 miles distant. Further south the construction of a branch line from Wagga Wagga to Tumberumba has been proposed, and also a branch from Culcairn to Corowa on the Murray.

Brisbane, Sy ney, Melbou and Adelaid connected b rail.

The southern main line is the most important of the railway lines in the Colony, as it passes through the richest and most thickly populated districts, and places the four great capitals of Australia—Brisbane, Sydney, Melbourne, and Adelaide—in direct communication with each other. It was not until 1883 that this line was actually open for traffic, the railway bridge across the Murray River, which flows between Wodonga, the Victorian terminus, and Albury, the terminus of the southern line of New South Wales, having been completed in that year. The traffic, both of passengers and goods, on the southern system generally, is very extensive, and arrangements for the regular carriage of mails between the two great cities enable letters to be delivered in less than twenty hours. The time occupied by the express trains on the journey is only eighteen hours, and the ordinary passenger trains running daily cover the distance (576 miles) between Sydney and Melbourne in twenty-four hours and a half. Sleeping cars are attached to these trains, on the New South Wales side, and the comfort of travellers is assured by the introduction of the most modern improvements in the construction and fitting up of the railway carriages. Since the completion of the railway from Melbourne to Adelaide, a distance of 508½ miles, European mails are landed at the latter port and forwarded overland to all parts of Victoria, New South Wales, and Queensland.

Rapid transi of mails.

Western sys

The western system of railways extends from Sydney in the direction of the Blue Mountains, of which it reaches the upper levels a little above Emu Plains, by a system of zig-zag lines which enables the locomotive to drag its heavy freight up the abrupt eastern slope of the mountains. The line runs the top of the range, until it descends into the valley below M Clarence, by another and more important zig-zag, the constru of which is a triumph of engineering skill. In its course bet these two zig-zags the line passes through magnificent mou scenery of a character peculiar to this part of the world, and the less remarkable. Leaving the mountains, the Western Rail after throwing out a branch from Wallerawang to Mudgee, e the Bathurst Plains, and connects the rich agricultural lands o Bathurst, Orange, and Wellington districts with the metrop Beyond Dubbo it enters the pastoral country, and reaches Darling at Bourke, 503 miles from Sydney. At Orange a br line, a few miles in length, connects that town with Molong, it has been proposed to make Orange the junction of a extending through the western pastoral districts, as far as town of Wilcannia, on the Darling. Further up, at Nyngan, miles from Sydney, a line is projected to connect the impo mining district of Cobar with Sydney, affording at the same rapid and sure means of communication with the pastoral cou of which Cobar is also the centre. The western railway sy also includes a short line from Blacktown to the Hawkesbury the towns of Windsor and Richmond.

Projected branch lines

Northern system.

The northern system originally had its terminus at Newc but a connecting line between Homebush and Waratah has constructed, which makes Sydney the head of the whole o railway systems of the Colony. The Hawkesbury River has crossed by a superb bridge, 2,896 feet long, in seven spans iron superstructure of which cost £327,000. This conne line allows direct communication between Adelaide, Melbo Sydney, and Brisbane, a distance from end to end of 1,808 and has been found of great value to those requiring quick tr and for the carriage of postal matter. It facilitates, more the active business life of the colonies, and will be of nat importance should at any time strategic movements require made in connection with military operations.

Hawkesbury River Bridge.

The northern line runs *viâ* Newcastle and the great coal centres, through the rich agricultural district of the Hunter Valley, to the important part of the Colony known as New England, passing through some of the largest inland towns in New South Wales, such as Maitland, which is the fourth town in the Colony in point of population, being surpassed only by the city of Newcastle and the town of Parramatta. The country traversed by this line north of Newcastle is extremely fertile. As the line ascends further north it passes through a rich pastoral and agricultural territory, and some important townships are reached, viz., Tamworth, Armidale, Glen Innes, and Tenterfield.

Projected branch lines.

The northern system also comprises a branch from Werris Creek to Narrabri, which it has been proposed to extend as far as Moree, in the north-west, and the Darling in the west, thus placing the Namoi and Gwydir pastoral districts in direct communication with the ports of Newcastle and Sydney. The construction of a branch from Muswellbrook to Cassilis is also contemplated. In the New England District a line has been long projected, which would connect the town of Glen Innes with that of Inverell, on one side, and with the city of Grafton, on the Clarence, on the other, with a further extension running parallel to the coast from the latter city to the Tweed River.

Circular Quay extension.

The question of the extension, through the heart of the metropolis, of the railway system—which at present has its terminus at some little distance from the business centre of the city—to the Circular Quay is again under consideration, and the Government favour a scheme which provides at the same time for the extension of the benefits of railway communication to the eastern suburbs of the city. A short branch line is also being constructed, which, when completed, will connect, through the line from Homebush to Waratah, at Pearce's Corner, the northern districts of the Colony with the north shore of Port Jackson. Proposals have been made from time to time to bridge the Harbour, and thus allow direct communication by rail between the suburbs on the north and the city on the south shore.

Besides the lines and branches included in the three sys above described, another line, entirely independent of them been constructed, connecting the metropolis with the coastal trict of Illawarra, which is rich alike in coal and the produ agriculture. The present terminus of this line is at the thri town of Kiama ; but it is proposed to continue the line to J Bay, closely following, and parallel to the coast. Parliament likewise authorized the construction of a line from the po Eden at Twofold Bay, in the south of the Colony, to the town of Bega, in the centre of a rich agricultural district.

Illawarra Line.

Growth of traffic.

The contrast between the present condition of the New S Wales railways and their humble beginning in 1855 is a rem able one. In 1856, the first year which can be fairly taken purposes of comparison, the number of passengers carried on railways was only 350,724, whilst in 1888 the number 15,863,615, or over 45 times greater: but the tonnage of g carried in each of these years represents a very much l increase, having grown from 2,469 tons to 3,171,401, or 1 times greater than in the first full year of railway operat In the earlier portion of the period of thirty-two years, w the above figures illustrate, it would seem that the larger of the railway earnings was obtained from the passenger tr and this was no doubt due to the fact that the first ways were almost entirely suburban. It was not until line crossed the mountains and opened up the far interior the proportions changed, and the goods traffic became principal source of revenue of the railways. This change beg take place in 1867, in which year the construction of railw after being for two years at a standstill, received a su impetus, 61 miles of line having been opened in the year na as against 19 miles only in the previous period of three y Since 1867 the proportion of earnings from goods traffic has stantly increased much faster than that obtained from passen and in 1888 the figures stood at £1,487,334 from goods, £1,022,193 from passengers.

Goods principal source of revenue

Earnings in different years compared.

The comparison between the earnings of the period previous to 871—when the net result every year represented only a small portion of the interest due on the capital expended in the construction of the lines—and the subsequent period affords matter for atisfaction. The figures for 1886 and 1887 show a falling off from hose of fourteen previous years; but it should be borne in mind n comparing these two years with the excellent results exhibited uring the period from 1874 to 1884, when considerably over 4 er cent. was realized, that the fall in receipts is due in a great measure to the previous years of drought, and also to the uncertainty ttaching to the land laws which were recently materially altered. t may also be added that, from the end of 1883 to the close of 885, 412 miles of railway were opened, chiefly through districts which are more sparsely populated, and in times of drought suffer more than any others; while in years of abundance the rivers of the western country enter into direct and damaging competition with any other means of carriage. Besides this, the statistics of railway returns in all the parts of the world show that few lines, except perhaps suburban ones, return, during the first few years after their opening, anything like a profit. In England a period of seven years has been allowed by good authorities for a line to develop traffic; and if such is the fact in more densely populated countries, whose resources are more developed than is the case in New South Wales, the result illustrated by the figures occasions no surprise.

Period required to develop traffic.

Loss on new lines.

The small receipts from the new lines opened from 1884 to 1887 and the cost of working necessarily lowered the general percentage of profits earned in those years. This is not an isolated experience in the history of railway management in this Colony. A glance at the table of net earnings and interest on capital expended upon railways, which will be found on page 489, will show that during the period from 1870 to 1876, in which the percentage of new lines yearly constructed was very small, being only 191 miles during the whole period of seven years, or about 27½ miles per year, the

Extensions reduce general returns.

railway profits show a constant and regular increase from 18 to 4·428 per cent. In the two years which followed 179 miles of railway were constructed, and the profits immediately showed a decline to 3·741 and 3·341 per cent. From 1880 to 188 the railways were extended chiefly to centres already populous and prosperous, viz., Riverina and New England, and the central districts of Wellington and Dubbo; and as these were years of remarkable prosperity, the railway profits suffered less than usual from the considerable extension that took place during that period. But the lines since constructed have been for the most part through pastoral country, or have formed costly links in the system of railway communication, such as the bridge and miles of line connecting the railways of New South Wales and Victoria at Albury. In these and other cases, as, for instance, the branch from Murrumburrah to Blayney, intended to connect the southern and western railway systems, the value of the new lines will not be felt until the entire systems of which they form a part are harmoniously at work. A large sum of money has been expended on each section of the line from Homebush to the Hawkesbury, and from the opposite shore of the river to Waratah; but not until the completion of the bridge over the Hawkesbury River, which was accomplished in May, 1889, could the line be expected to return the interest on the money expended upon it. Expensive new lines result in an increase of percentage of working expenses to the gross earnings, as these lines have to be kept in full working order and repair whilst actually returning in gross earnings little over the cost of maintenance. The small returns on expensive incompleted branches further tend to diminish greatly the profits of a railway system taken as a whole; but such is the history of railway construction in all parts of the world, and New South Wales is no exception to the general rule.

Light lines.

It is proposed that future extensions shall be constructed on a different principle, with the exception of coast lines, the gauge of 4 ft. 8½ in., which has been adopted throughout the Colony ng the same, but the lines being of lighter and less costly tion than those already in existence. The almost uniformly aracter of the country through which these extensions will ed facilitates the adoption of the light line system, and a able saving in the cost of construction will thus be effected.

Average cost per mile.

following table will show the cost of construction of the branches of the railway system of the Colony to the middle year 1888. The average cost for the whole of the lines is ed to be £11,199 per mile, including all charges, except ing-stock, machinery, and workshops, a figure, which, con- the character of some parts of the country through which s have been carried, and the cost of labour, which is con- ly greater in Australia than in most other countries, is by ns a high one.

Cost of Construction of Railway Lines.

Lines opened for Traffic.	Length in Miles.	Total Cost.	Cost per Mile.
		£	£
Harbour Branch	1	251,238	251,238
to Granville	13	1,065,709	81,977
's Creek Branch..	½	6,459	12,918
le to Wodonga	374½	4,207,556	11,235
o Hay	167	939,748	5,627
lera to Jerilderie	65	406,464	6,253
le to Bourke	490	5,103,127	10,415
wang to Mudgee	85	949,199	11,167
wn to Richmond	16	170,729	10,670
n to Michelago	87½	840,057	9,600
undra to Gundagai	34	222,982	6,558
to Molong	22	268,013	12,182
burrah to Blayney	106	1,031,283	9,729
to Waterfall, and Clifton to Kiama	58	971,455	16,749
sh to Hawkesbury, and Gosford to ratah	88½	1,671,292	18,884
tle to Tenterfield	391	4,750,516	12,150
Creek to Narrabri	97	553,921	5,710
Island Branch	1½	67,145	44,763
Branch	4	57,602	14,400
	*2,101½	23,534,495	11,199

* 23½ miles additional were opened during the last half of 1888.

Lines in pastoral country less costly.

In considering these figures in detail it is interesting to note the comparative low cost per mile of the extensions through th pastoral country from Junee to Hay, and from Werris Creek to Narrabri, which average only £5,627 and £5,710 per mile respectively, or less than half the general average cost of other lines. The cost of the light lines, which will shortly be in cours of construction through a country of similar formation, should no reach even the figures just stated.

Cost in other countries.

The cost of railway construction in some of the principal countri of the world, for which figures are available, is given hereunde The figures include the whole expense of equipping the lines fo traffic, and are brought down to the latest dates available.

Countries.	Cost per Mile open for Traffic.
	£
United Kingdom	42,486
Belgium	36,508
France	27,704
Germany	21,236
Russia in Europe	20,000
India	13,202
Canada	11,551
Cape Colony	9,217
New South Wales	13,473
Victoria	13,456
New Zealand	7,617
Queensland	6,906
South Australia	6,452
Tasmania	8,020

EARNINGS AND WORKING EXPENSES.

Gross earnings and working expenses.

The gross amount of revenue derived from all sources during 18 was £2,509,527, a larger sum than was obtained in any previ year. The cost of working the railways reached £1,578,590, that the net earnings during 1888 were £930,937, or 37 per cen of the total earnings. The following table gives the gross earnin and total working expenses with the proportion per cent. of th expenditure to the receipts.

Earnings and Working Expenses, and Percentage of Working Expenses to Gross Earnings.

	Gross Earnings.	Working Expenses.	Percentage of working expenses to gross earnings.
	£	£	per cent.
	9,249	5,959	64·43
	32,283	21,788	67·49
	43,387	31,338	72·23
	62,309	43,928	70·50
	61,760	47,598	77·07
	62,269	50,427	80·98
	75,004	61,187	81·58
	103,871	68,725	66·16
	123,941	96,867	78·16
	147,653	103,715	70·24
	166,032	108,926	65·60
	168,535	106,230	63·64
	189,072	117,324	62·08
	224,359	144,201	64·29
	264,975	176,362	66·57
	307,142	206,003	67·08
	355,322	197,065	55·46
	424,989	207,918	48·92
	484,236	238,035	49·16
	536,575	257,703	48·03
	614,648	296,174	48·18
	693,225	339,406	48·96
	815,920	418,985	51·35
	902,989	536,988	59·47
	952,366	604,721	63·49
	1,161,017	647,719	55·79
	1,444,226	738,334	51·12
	1,698,863	934,635	55·02
	1,931,464	1,177,788	60·97
	2,086,237	1,301,259	62·37
	2,174,368	1,458,153	67·06
	2,160,070	1,492,992	69·12
	2,208,295	1,457,761	66·01
	2,509,527	1,578,590	62·90

oportion of revenue now absorbed by working expenses larger than formerly. The accompanying table gives the working expenses per train mile for 10 years, and it pear that since 1881 the expenses have increased 10·11d. considerable increase is due to the cost of maintenance and is what might reasonably be expected, in view of the ension of lines without corresponding traffic. The cost of the traffic during the year 1888 was 51·66d. per train so that the interest on capital invested should be covered nditure would require to be reduced to 45·43d. per train ich was nearly the rate of 1881.

Distribution of Working Expenses per Train Mile.

	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	*1888.
	d	d	d	d	d	d	d	d	d	d
Maintenance of Way	11·76	11·40	11·55	12·96	13·88	13·77	15·71	16·02	14·73	14·81
Locomotive Power	17·56	16·33	14·99	15·56	15·44	16·10	15·62	16·58	16·44	16·21
Repairs—Carriages, Waggons, &c.	2·68	2·47	2·47	2·30	2·27	2·99	2·65	3·58	3·10	4·07
Traffic Charges......	15·87	15·84	14·59	13·76	14·23	14·12	14·92	15·95	16·13	16·01
Compensation, Personal...	0·04	0·45	0·24	0·16	0·12	0·11	0·26	0·24	0·45	0·81
Goods..........................	0·03	0·04	0·03	0·05	0·07	0·03	0·04	0·04	0·04	0·17
Miscellaneous	1·55	1·46	1·29	1·45	1·60	1·65	3·52	2·89	3·16	3·19
	49·49	47·99	45·16	46·24	47·61	48·77	52·72	55·30	54·05	55·27

net revenue for 1888 was £930,937, while the average t of capital expended on lines in operation during the year 28,031,620, so that the net return per cent. was 3·321, a ctory advance on the results of the two previous years. terest payable on the average capital in use during 1888 1,121,265, or at the rate of 4 per cent. The net deficiency railways of the Colony to be made good out of revenue was 190,328. Net revenue.

Earnings, and Interest on Capital expended on Railways.

Net Earnings.	Interest on Capital.	Year.	Net Earnings.	Interest on Capital.
£	per cent.		£	per cent.
3,290	·638	1872	217,071	3·397
10,495	1·536	1873	246,201	3·653
12,050	1·176	1874	278,872	4·074
18,381	1·492	1875	318,474	4·396
14,162	1·107	1876	353,819	4·428
11,841	·832	1877	396,935	4·468
13,817	·899	1878	366,001	3·741
35,146	1·842	1879	347,645	3·341
27,073	1·097	1880	513,298	4·353
43,938	1·669	1881	705,892	5·307
57,106	2·079	1882	764,228	5·135
62,305	2·236	1883	753,676	4·484
71,748	2·185	1884	784,978	4·201
80,158	1·973	1885	716,215	3·370
88,613	1·892	1886	667,078	2·901
101,139	1·817	1887	750,534	2·960
158,257	2·688	1888	930,937	3·321

Comparison with other countries.

Points of comparison between the railways of a large an thinly inhabited country such as New South Wales and th countries of the Old World are difficult to obtain. The followin tables, however, illustrate the population and area of territory per mile of line open in the principal countries of the world. I will be seen that New South Wales comes fairly well out of th comparison.

Length of Railway in various Countries, with Population an Area per Mile of Line.

Countries.	Length of Railway.	Population per Miles of Line.	Area per Mi of Line.
Australasia :—			sq. miles.
New South Wales	2,206	492	141
Victoria	2,191	498	40
South Australia	1,500	209	602
Queensland	1,931	201	346
Western Australia	257	164	3,797
Tasmania	485	301	54
New Zealand	1,861	326	56
Argentine Republic	4,216	902	260
Austria-Hungary	13,957	2,942	17
Belgium	2,763	2,139	4
Brazil	5,281	2,447	623
Canada, Dominion of	12,335	361	281
Chili	1,600	1,579	181
Denmark	1,215	1,725	12
France	29,240	1,307	7
Germany	28,956	1,618	7
Great Britain and Ireland	19,578	1,931	6
Greece	385	5,521	70
India (British)	14,383	17,868	61
Italy	7,375	4,103	13
Japan	585	67,784	253
Mexico	4,685	2,188	160
Netherlands	1,620	2,710	8
Portugal	1,165	3,697	30
Russia (in Europe)	17,520	5,119	118
Spain	5,523	3,143	35
Sweden and Norway	4,426	1,484	65
Switzerland	1,923	1,511	8
Turkey (in Europe)	1,150	4,059	55
United States of America	153,990	369	23

PASSENGER TRAFFIC.

Journeys per head of population.

he number of journeys made by each person in the Colony averages 16·7 per annum, as against 4·70 in 1877. The ease has been exceedingly rapid as well as fairly uniform, as be seen from the following table :—

Year.	Number of Journeys.	Year.	Number of Journeys.
1877	4·70	1883	12·31
1878	5·63	1884	12·78
1879	6·25	1885	14·51
1880	7·50	1886	15·19
1881	9·08	1887	14·13
1882	11·30	1888	16·70

Journeys per head in differen Countries.

The figures just given include journeys of season-ticket holders ; xcluding this traffic, the number of journeys per head would be bout 10·3, a number larger than the average of any of the djacent colonies, Victoria excepted. The average number of ourneys performed by inhabitants of the United Kingdom is 19·0, which largely exceeds that of any other population. With this xception, railway travelling is more common in Victoria and New South Wales than in any other country. The average of some of the more important places are :—Belgium, 9·3 ; France, 5·5 ; Germany, 5·1 ; United States, 5·4 ; Austria, 1·2 ; Russia, 0·4 ; South Australia, 10·4 ; Queensland, 4·5. The total number of persons travelling, including season ticket-holders, and the revenue

Number of passengers carried.

received, are shown in the next table, which should be read in connection with that just given.

Year.	Number of Passengers carried.	Receipts.	Year.	Number of Passengers carried.	Receipts.
		£			£
1855	98,846	9,093	1872	753,910	164,862
1856	350,724	29,526	1873	875,602	178,216
1857	329,019	34,970	1874	1,085,501	188,595
1858	376,492	45,858	1875	1,288,225	205,941
1859	425,877	46,502	1876	1,727,730	233,870
1860	551,044	45,428	1877	2,957,144	271,588
1861	595,591	49,637	1878	3,705,733	306,308
1862	642,431	62,096	1879	4,317,864	319,950
1863	627,164	71,297	1880	5,440,138	390,149
1864	693,174	81,487	1881	6,907,312	488,675
1865	751,587	92,984	1882	8,984,313	587,825
1866	668,330	85,636	1883	10,272,037	661,751
1867	616,375	87,564	1884	11,253,109	745,665
1868	714,563	99,408	1885	13,506,346	830,904
1869	759,635	109,427	1886	14,881,604	847,916
1870	776,707	117,854	1887	14,451,303	850,499
1871	759,062	129,496	1888	15,863,615	1,022,193

Average distance travelled per passenger.

In spite of the extension of the lines into the interior of the country the average distance travelled by each passenger has not increased. This is due to the growth of the suburban traffic, which has been more rapid, as might be expected, than the increase in long distance travelling. The following table shows the average length of journey of each passenger for the eleven years prior to 1888, the information for the last named year not being available.

Average Distance travelled by each Passenger.

Year.	No. of Miles.	Year.	No. of Miles.
1877	12·45	1883	13·12
1878	12·56	1884	13·13
1879	13·44	1885	12·66
1880	13·45	1886	12·24
1881	12·41	1887	11·83
1882	12·47		

Average fares per mile.

The average fare paid per mile per passenger is given in the fol- ing table. It will be observed that the rates have been consider- y reduced since 1877, the major part of the reduction shown ng due to the large increase in suburban traffic by season ticket- ders.

Average Fare paid per Mile per Passenger.

Year.	Amount.	Year.	Amount.
	s. d.		s. d.
1877	0 1·52	1883	0 1·01
1878	0 1·37	1884	0 1·03
1879	0 1·14	1885	0 1·00
1880	0 1·12	1886	0 0·94
1881	0 1·21	1887	0 0·96
1882	0 1·10		

Average fares per passenger.

The reduction in the fare per mile has been attended by a uction in the average fare paid per passenger; so that the fare d in 1888 was only 12·25d. as against 18·75d. eleven years pre- usly, as will be seen below.

Average Amount of Fare paid per Passenger.

Year.	Average amount of Fare.	Year.	Average amount of Fare.
	s. d.		s. d.
1877	1 6·75	1883	1 1·25
1878	1 5·37	1884	1 1·5
1879	1 3·50	1885	1 0·5
1880	1 3	1886	0 11·5
1881	1 3	1887	0 11·75
1882	1 1·5	1888	1 0·25

Classification of traffic.

Classification of Traffic:—Measured by the proportion of persons rried, the second class traffic is more than twice as important as e first class, the per-centage of the total traffic being 43·34 and 9·75 respectively, while the journeys of season ticket holders of oth classes amounted to about 36·91 per cent. Estimated by the rnings, the relative proportions of each description of traffic are tirely changed so that the second is little more important that e first class, as will be seen in the following table.

Proportion of Traffic and receipts from each class of Passenger Traffic.

Class of Traffic.	Proportion of passengers of each class.	Proportion of Receipts to each class.
First Class	19·75	44·45
Second Class	43·34	47·91
Season Tickets	36·91	7·64
	100·00	100·00

Receipts from passenger traffic per train mile.

In spite of the reductions in the fare payable the receipts per train mile during 1888 were fairly maintained. This denotes a less amount of dead weight carried per ton of passengers, and will perhaps be best seen from the following figures :—

Receipts from Passenger Traffic per Train Mile.

Year.	Amount received.	Year.	Amount received.
	s. d.		s. d.
1877	5 5·4	1883	6 2·55
1878	5 2·3	1884	6 1·4
1879	5 0·6	1885	6 1·7
1880	5 7·46	1886	6 1·72
1881	6 1·12	1887	6 0·32
1882	6 4·71	1888	6 0·99

Of the sum stated above for 1888 27·33d. was due to first class traffic, 29·45d. to second class, 4·70d. to season ticket holders, while 11·51d. was earned chiefly by the carriage of parcels, mails, horses, and carriages.

Earnings per mile.

The earnings of the passenger traffic per mile of line in operation which had been decreasing for some few years, showed a satisfactory advance during 1888, and it is expected that the improvement will be well sustained during the ensuing year.

Receipts from Passenger Traffic per Mile of Line open.

Year.	Amount received.	Year.	Amount received.
	£ s. d.		£ s. d.
1877	492 0 0	1883	508 6 0
1878	483 18 0	1884	520 14 0
1879	451 6 0	1885	499 10 0
1880	495 14 0	1886	474 8 0
1881	511 4 0	1887	439 6 1
1882	525 2 0	1888	487 4 5

Receipts per 100 tons of passengers carried one mile.

e earnings per ton of passengers net, and including tare, have een determined since 1887 ; but the results of previous years' ings are known. It would appear that during 1886, in order rry 100 tons weight of passengers, the actual weight of train to be moved was 2,521 tons. In 1877 the load required to oved in order to carry 100 tons weight of passengers was 0 tons, so that the proportion of tare saved during the period about 36 per cent. The monetary saving effected in this ect is shown in the following table :—

Receipts per 100 Tons of Passengers carried One Mile.

Year.	Earnings from carrying 100 tons of Passengers 1 mile.	Earnings from carrying 100 tons of Passengers 1 mile, including tare.
	s. d.	s. d.
1877	173 6	5 1·4
1878	154 11	4 9
1879	136 10	4 3·9
1880	134 0	4 6·4
1881	144 5	4 1·2
1882	134 8	4 11·9
1883	124 10	4 8·7
1884	128 8	4 10·6
1885	126 8	4 10·5
1886	122 11	4 10.5
1887	129 1	....

Receipts per head of population.

The average receipts from passenger traffic per head of population have very rapidly increased, and during 1888 stood at 19s. 2·5d., as against 8s. 7·56d. in 1877. This increase is not due, as might be supposed, to the longer distance travelled by passengers, for it will be seen from a previous table that this average distance is now somewhat shorter than formerly, but to a much greater proportionate increase in the railway mileage than in the population, so enabling a larger measure of railway travelling to be indulged in. The increase is also, to some extent, attributable to the greater favour with which railway travelling is now regarded.

Receipts from Passenger Traffic per head of Population.

Year.	Amount per head.	Year.	Amount per head.
	s. d.		s. d.
1877	8 7·56	1883	15 10·32
1878	9 3·72	1884	16 11·16
1879	9 3·12	1885	17 10·32
1880	10 9	1886	17 1·56
1881	12 10·20	1887	16 7·64
1882	14 9·48	1888	19 2·50

GOODS TRAFFIC.

Analysis of the goods traffic.

The weight of goods carried per head of population in New South Wales compares favourably with that of many countries where railways have been long established. The average tonnage for the last twelve years was—

Tonnage of Merchandise carried per head of Population.

Year.	Tons.	Year.	Tons.
1877	2·27	1883	3·43
1878	2·47	1884	3·55
1879	2·49	1885	3·52
1880	2·35	1886	3·28
1881	2·68	1887	3·27
1882	3·29	1888	2·98

Tonnage of merchandise compared with other countries

he largest amount of tonnage per inhabitant is in Scotland, re it averages 9·5; the lowest important European country is ·, with only 0·4 tons per head. The relative position of New ·h Wales will be seen from the next table, the figures inserted g the average of five years.

nnage of Merchandise moved per head of Population in the Principal Countries of the World.

	Tons.		Tons.
otland	9·5	Victoria	3·0
gland and Wales	8·4	Australia (all colonies) ...	3·0
ited States..................	7·6	Canada	3·1
lgium	6·5	France	2·5
rmany	5·3	Ireland, Japan, British India	0·8
w South Wales............	3·3	Spain, Italy, Russia ...0·4 to 0·6	

Tonnage of goods carried.

he absolute tonnage of goods carried in each year on New South les railways and the earnings therefrom are given in the wing table :—

Tonnage of Goods and Earnings of Traffic.

ar.	Tonnage of Goods.	Earnings.	Year.	Tonnage of Goods.	Earnings.
		£			£
55	140	156	1872	825,360	260,127
56	2,469	2,757	1873	923,788	306,020
57	20,847	8,417	1874	1,070,938	347,980
58	33,385	16,451	1875	1,171,354	408,707
59	43,020	15,258	1876	1,244,131	459,355
860	55,394	16,841	1877	1,430,041	544,332
861	101,130	25,367	1878	1,625,886	596,681
862	205,139	41,775	1879	1,720,815	632,416
863	218,535	52,644	1880	1,712,971	770,868
864	379,661	66,167	1881	2,033,850	955,551
865	416,707	73,048	1882	2,619,427	1,111,038
866	500,937	82,899	1883	2,864,566	1,269,713
867	517,022	101,508	1884	3,124,425	1,340,572
868	596,514	124,951	1885	3,273,004	1,343,464
869	714,113	155,548	1886	3,211,951	1,312,154
870	766,523	189,288	1887	3,339,253	1,357,796
1871	741,986	225,826	1888	3,171,401	1,487,334

Haulage.

The average distance each ton of goods was carried during 18 was 53·9 miles, and the distance for 1887 was probably about th same. This shows a considerable increase over the averag distance of 1877, but is less than that of the two years previous 1885. The figures for 1888 are not available.

Average Miles of Haulage per Ton of Goods.

Year.	Miles.	Year.	Miles.
1877	34·1	1882	47·7
1878	36·1	1883	54·2
1879	39·2	1884	54·3
1880	46·5	1885	53·4
1881	49·1	1886	53·9

Tons of goods carried per mile of line.

The number of tons of goods carried over each mile of line operation has greatly decreased, especially since 1882. This partly due to the opening of long extensions since the d mentioned, but it is to no slight extent the result of the disastro seasons which have afflicted parts of the interior of the Colon while during 1888 a strike amongst the coal-miners in the Hunt River district deprived the railways of a large amount of traf and explains the great falling off shown below.

Tons of Goods carried per Mile of Line open.

Year.	Tons.	Year.	Tons.
1877	2,590	1883	2,199
1878	2,568	1884	2,182
1879	2,427	1885	1,967
1880	2,176	1886	1,798
1881	2,127	1887	1,725
1882	2,340	1888	1,512

Receipts from goods per mile.

The fall in the amount of goods carried per mile of line naturally accompanied by a fall in the earnings per mile f goods carriage. In 1877 the receipts from goods traffic amoun to £986 2s. per mile; in 1881 to £999 10s., declining in 188 £708 18s. 7d., or 29 per cent. less than the figures of the y last mentioned.

Receipts from Goods Traffic per Mile of Line open.

Year.	Amount	Year.	Amount.
	£ s. d.		£ s. d.
1877	986 2 0	1883	975 4 0
1878	942 12 0	1884	936 2 0
1879	892 0 0	1885	807 12 0
1880	979 10 0	1886	732 6 0
1881	999 10 0	1887	701 6 3
1882	992 8 0	1888	708 18 7

Large coal traffic.

he largest tonnage of goods carried during 1888 was coal. following table gives the main classes into which the traffic ivided, with the tonnage of each class per mile of line open, ı the receipts per mile of line and per train mile.

Average Receipts from Goods Traffic.

Class of Traffic.	Tons per mile of line.	Receipts per mile of line.	Receipts per train mile.
		£ s. d.	Pence.
chandise	581	407 6 8	55·45
l.................................. ..	1,036	71 11 7	9·74
ol	37	107 2 2	14·58
stock	33	81 1 10	11·04
cellaneous	......	3 10 2	0·48
Total	1,687	670 12 5	91·29

Average earnings per ton.

he average earnings from the carriage of goods per ton per e have fallen greatly during the last ten years. The lowering freight is chiefly, but not entirely responsible for the decline, especially during late years, the increase in the amount of goods ried, which is shown on page 497, has been chiefly among se descriptions of goods which are carried at the least remunera- rates. The combined result of the action of the reduced ghts, and the carriage of a larger proportion of low-rate goods, l best be seen from the column of the following table giving the average receipts for a ton of goods, including tare, carried 1 e. In 1877 the earnings amounted to ·62d. per ton, while in 6 they had fallen to ·38d.

Receipts from goods traffic.

Receipts from Goods Traffic.

Year.	Receipts per ton per mile, not including tare.	Receipts per ton per mile, including tare.	Receipts per ton of merchandise carried.	Receipts p train mile
	pence.	pence.	s. d.	s. d.
1877	2·68	0·62	7 7·3	9 9·6
1878	2·44	0·52	7 2·4	8 1·1
1879	2·25	0·49	7 4·2	7 7·1
1880	2·72	0·54	9 0	8 3·9
1881	2·29	0·55	9 5·4	8 2·8
1882	2·13	0·44	8 5·8	7 4
1883	1·96	0·40	8 10·3	6 8
1884	1·90	0·41	8 6·9	6 9
1885	1·86	0·29	8 2·5	6 10
1886	1·81	0·28	8 1·7	7 0
1887	1·82	——	8 1·5	7 5

Receipts per head.

The receipts per head of population from goods traffic re
the maximum in 1883, when they amounted to £1 10s. 5·16d
1884 they remained at the same figure, but in 1888 the am
received had fallen to £1 7s. 11·48d. The receipts during each
since 1877 are shown below.

Receipts from Goods Traffic per head of Population.

Year.	Amount.	Year.	Amoun
	£ s. d.		£ s.
1877	0 17 3·72	1883	1 10 5
1878	0 18 1·68	1884	1 10 5
1879	0 18 3·72	1885	1 8 10
1880	1 1 2·88	1886	1 6 8
1881	1 5 1·56	1887	1 6 7
1882	1 7 11·40	1888	1 7 11

Lines open, under construction, and authorised.

Up to 31st December, 1888, the total length of lines open
traffic was 2,125 miles, and 55 miles were in course of con
tion at that date, making a total of 2,180 miles of road eithe
for traffic or being constructed. Besides this, Parliamen
voted funds for the construction of about 1,245 miles of ra
but authority has not been given to proceed with the works.

PASSENGER TRAFFIC.

Journeys per head of population.

The number of journeys made by each person in the Colony now averages 16·7 per annum, as against 4·70 in 1877. The increase has been exceedingly rapid as well as fairly uniform, as will be seen from the following table :—

Year.	Number of Journeys.	Year.	Number of Journeys.
1877	4·70	1883	12·31
1878	5·63	1884	12·78
1879	6·25	1885	14·51
1880	7·50	1886	15·19
1881	9·08	1887	14·13
1882	11·30	1888	16·70

Journeys per head in different Countries.

The figures just given include journeys of season-ticket holders ; excluding this traffic, the number of journeys per head would be about 10·3, a number larger than the average of any of the adjacent colonies, Victoria excepted. The average number of journeys performed by inhabitants of the United Kingdom is 19·0, which largely exceeds that of any other population. With this exception, railway travelling is more common in Victoria and New South Wales than in any other country. The average of some of the more important places are :—Belgium, 9·3 ; France, 5·5 ; Germany, 5·1 ; United States, 5·4 ; Austria, 1·2 ; Russia, 0·4 ; South Australia, 10·4 ; Queensland, 4·5. The total number of persons travelling, including season ticket-holders, and the revenue

Number of passengers carried.

Silverton and Broken Hill line

During the year 1888 a line, 35 miles 54 chains in length, laid down from the Barrier silver mines, Silverton, and Bro Hill to the South Australian Border. The line, since its in tion, has had large support. The following table shows operations of these lines during the past year :—

Name of Line.	Date of Opening.	Length of Line.	Total Expended on Construction.	Passengers Carried.	Goods Carried.	Main Miles Run.	Rolling	
							Locomotives.	Passenger
		m. c.	£	No.	Tons.		No.	N
Deniliquin-Moama..	4 July, 1876	45 0	162,672	17,114	25,680	60,885	4	1
Silverton	13 Jan., 1888	35 54	152,800	49,551	114,513	84,560	5	1

CITY TRAFFIC, TRAMWAYS, ETC.

Within the Metropolis of Sydney the public traffic, with exception of the tramway system, is controlled by four Tr Commissioners, comprising the Mayor of Sydney, the Inspe General of Police, a representative elected by the Alderm Suburban Municipalities, and one by the holders of licenses u the Commissioners. The tramways, like the railways, are property of the Government, and are under the control of Commissioners for Railways. There are five distinct system tramways in operation, having a total length of 51 miles. Metropolitan Tramways are virtually street railways, and ha total length of 31 miles, including one and a half mile of c line at St. Leonards. The other systems are—Kogarah Sandringham, length, 5 miles; Newcastle and Plattsburg, miles; and Campbelltown and Camden, 7·5 miles. The named is a feeder to the railway, and has been included unde general railway system already described.

Tramways.

Metropolitan lines.

The magnitude of the operations of the metropolitan tram quite overshadows that of the other systems. The follo figures refer only to the Sydney systems, including the North S cable line.

Interest on capital.

he net return on capital has varied greatly from year to year. favourable results of the first three years encouraged the ef that the metropolitan tramways would prove a source of ease to the general revenue of the Colony. These anticipas, however, have been far from realized, as will be seen from following table.

Metropolitan Tramways—Capital, Expenditure, and Interest realized.

Year.	Mileage.	Capital Expenditure.	Interest received on Capital per cent.
		£	
1880	4	60,218	12·34
1881	9½	169,450	6·16
1882	22	412,561	6·80
1883	25	544,105	2·22
1884	27½	643,111	0·76
1885	27½	708,109	2·17
1886	29	812,170	3·03
1887	31	803,086	1·65
1888	31	842,360	2·86

Fare per mile.

he fares paid on the tramways average about 1d. per mile, lines being divided into sections of about 1 and 2 miles. number of persons using the tram-cars has not been ascered with any exactness, as the tickets collected give only a tial indication of the number travelling. It is estimated, howr, that during 1888 18,500,000 passengers were carried.

Expenditure on construction.

lling all lines, except the Camden-Campbelltown, the to the close of 1888 was £907,907 on 43½ miles and £106,757 on extensions not opened, in all

rnings and working are given in the

Expenditure on Construction, Earnings, Working Expenses, &c., of State Tramways.

Year.	Total Length of Lines in Miles.	Capital Expended on Lines open for Traffic.	Total Capital Expended.	General Total of Passengers' Tickets.	Value of Fares received.	Total Earnings.	Expenditure for Working Expenses.	Net Earnings over Working Expenses.
		£	£	No.	£	£	£	£
1879	1½	22,061	22,061	443,341	4,416	4,416	2,278	2,139
1880	4½	60,218	61,901	2,086,897	18,968	18,980	13,444	5,536
1881	11¼	181,659	220,318	7,090,125	61,921	62,549	52,107	10,442
1882	29½	447.939	458,145	15,296,238	127,124	128,354	120,181	8,174
1883	32½	579,439	648,125	25,713,433	190,209	193,929	183,218	10,711
1884	35	683,179	789,499	30,231,382	218,885	223,454	215,086	8,368
1885	35	748,506	890,723	39,620,614	220,332	227,144	207,898	19,246
1886	36½	854,260	985,602	*53,973,311	230,374	234,143	207,635	26,507
1887	51	917,995	1,023,635	52,159,808	225,764	229,772	211,722	18,050
1888	†43½	907,907	1,014,664	55,668,800	241,838	241,838	217,629	24,209

RAILWAY ACCIDENTS.

ıe railways of the Colony have been as free from accidents of a us character as the lines of most other countries. In order ıtain a common basis of comparison it is usual to find the ɔrtion which the number of persons killed or injured bears to total passengers carried. There is, however, no necessary ection between the two, for it is obvious that accidents may r on lines chiefly devoted to goods traffic, and a more nable basis would be the accidents to passengers only compared the number of passengers carried. The data from which a comparison could be made are wanting for most countries; following figures, therefore, show the number of all descrip-, including not only passengers and employés, but trespassers, d or injured on the lines of the most important countries, pared with the total number of passengers carried, and are piled from various authorities:—

Railway Accidents.

Countries.	Average per million passengers carried.	
	Killed.	Injured.
ıany	2·39	8·05
ria-Hungary	4·83	10·17
um	3·74	13·79
ıark	0·71	3·28
;e	2·59	5·30
	5·03	24·65
ay	2·50	0·50
nd	1·41	2·12
ıania	11·00	27·00
a	12·11	19·35
Zealand	2·52	4·30
d Kingdom	1·70	6·12
ıge, Europe	2·60	7·73
United States	1·51	6·10
Canada*	17·50	66·60
India	6·00	10·36
New South Wales*	2·66	5·90
Victoria*	1·46	5·65
South Australia*	1·40	3·04
New Zealand	2·20	25·30

* Average of series of years.

Colony's average satisfactory.

It will be seen that New South Wales stands on a level with the average of the principal European countries. If, however, the more legitimate comparison be made of the proportion of casualties amongst passengers only, fewer countries are available for reference. These are given below:—

Passengers Killed or Injured.

Years over which figures extend.	Countries.	Average per Million Passengers.	
		Killed.	Injured.
1883	United Kingdom	0·18	2·07
1881–3	Belgium..........................	0·19	1·45
1885–7	Canada	0·82	5·74
1878–87	New South Wales	0·42	3·05
1881–5	Victoria	0·17	3·92
1882–5	South Australia	0·32	0·76
1886	New Zealand	0·88	1·98

The foregoing statements show that the Victorian lines are as safe as those of any country in the world, the percentage killed being less even than in the United Kingdom. This mode of comparison is, however, not a perfect one, as the question of the distance travelled by each passenger is an important element of the risk run, and is omitted from consideration. If this were made a factor of the comparative statement it would probably be found that the risk of each traveller by rail would show less variation in the different countries than would seem to be the case from the figures just given.

Classification of casualties.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, servants of the railways trespassers ; and the accidents themselves may be classified those arising from causes beyond the control of the person red, and those due to misconduct or want of caution. Adopting classifications the accidents during 1887 were—

cidents rising.	Passengers.		Railway Employés		Trespassers, &c.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
causes ond their rol.	5	78	1	1	...	...	6	79
ugh mis- luct or t of cau- .	5	12	15	16	12	5	32	33
Total.....	10	90	16	17	12	5	38	112

ccidents during 1887 were very numerous, especially amongst engers, but happily 1888 was much more favourable. Taking fifteen years which closed with 1887, there were in all 282 s of fatal and 628 cases of non-fatal injuries.

	Killed.	Injured.
Passengers	42	304
Employés	127	270
Others	113	54
	282	628

ill be seen that 15 per cent. of those who were killed were engers, 45 per cent. servants of the Railway, and 40 per cent. r persons, chiefly trespassers. Of the non-fatal accidents, er cent. happened to passengers, 43 per cent. to employés, and r cent. to other persons.

Tramway accidents.

o statement can be made of the number of persons injured on tramways of the city compared with the total number of ons carried, as the latter is not definitely known. A record however has been kept of the number of accidents. These are as follows :—

Year.	Killed.	Injured.
1880	2	3
1881	8	29
1882	8	48
1883	11	40
1884	14	46
1885	6	22
1886	7	34
1887	9	27

There were, therefore, 65 deaths and 249 non-fatal accidents, a number which cannot but be looked upon as very considerable; of these 21 deaths and 101 non-fatal accidents were amongst passengers; 6 fatal and 42 other accidents amongst tramway employés; and 38 deaths and 106 non-fatal accidents to other persons, all directly attributable to the tramway system.

Omnibus traffic.

Besides the tramways the citizens of Sydney are well provided with other means of travelling within the city and suburban limits, as there are numerous omnibus and cab proprietaries. At the head of these stands the Sydney Tramway and Omnibus Company. No tramways are maintained by this company, as its name would imply, but lines of omnibuses have been established by it in all the principal routes of traffic from the city to the suburbs. This company has a working plant comprising 947 horses and 170 vehicles, and employs 268 men.

Besides these there are public vehicles belonging to private individuals, or small associations, plying between the city and some of the more distant suburbs, to the number of 261.

Cabs and vans.

The number of cabs registered and licensed by the Transit Commissioners under the Municipal by-laws amounts to 1,142, in addition to which there are 471 vans and other vehicles; and the public interest is secured against exaggerated demands on the part of licensed cabmen, and other drivers of public vehicles, by a system of fares fixed on a scale liberal to the licensee, whilst not too high for the public to fairly pay. The drivers are placed nder the direct control of the Transit Commissioners, who have ower to obtain redress from the owners of the vehicles, should any just complaints be made against them. The following shows the number of vehicles of each class licensed during the year 1888 and the number of registered drivers :—

Public vehicles.

Description of Vehicle.	No. of Vehicles.	License Fees.	No. of Drivers.	License Fees.
		£		£
Omnibuses	261	1,507	*527	257
Waggonettes	11	54		
Carriages	6	15	1,390	695
Cabs	1,142	2,201		
Drays and vans	471	863	450	113
Total	1,891	4,640	2,367	1,065

* Includes 28 conductors.

POSTS AND TELEGRAPHS.

Postal and telegraphic communication.

In the matter of postal and telegraphic communication the Colony of New South Wales is liberally provided. Not only is the intercolonial telegraphic system as perfect as can be desired, but the metropolis is in direct communication with Europe and the outer world by means of the cables connecting with the various Asiatic continental telegraph lines.

Submarine cable.

A submarine cable also connects the Colony with New Zealand, and has its Australian terminus within sight of the spot where Captain Cook landed on the shores of Botany Bay, and within a stone's throw of the monument erected to the memory of La Pérouse—the unfortunate and gallant emulator of the great English navigator—and the tomb of Père Le Receveur, the botanist attached to his staff.

Steam communication with England.

Regular steam communication with England was established in 1852. Prior to that year the Colony was practically outside the limits of efficient postal service. In the year named, however, the steamships Australia, Chusan, and Great Britain were despatched from England, making the voyage in sixty days, and afforded means of communication which were soon rapidly veloped. The time of delivery of mails from Sydney to Lon is now thirty-one days, and it is possible that the period will yet further shortened.

Communication with Europe and America.

From Sydney, four great lines of ocean steamships—the Pe sular and Oriental Company, the Orient Company, the Message Maritimes of France, and the steamers of the North Ger Lloyd's—carry mails from Australia to England and the contin of Europe, whilst a direct line of steamers under contract with Governments of New South Wales, New Zealand, and Amer carry the mails to New Zealand and the United States. Bes these means of communication with the Old World, the in colonial and local lines of telegraph are numerous and effici There is not a township of any importance which is not conne with the metropolis by wire, or that is not reached either by tr or coach.

Telegraph lines

At the end of December, 1888, there were in the Col 22,219 miles of telegraphs in operation, and the total cost of construction of the various lines reached the sum of £704, There were 460 telegraph stations, and the total amount ear by the system of telegraphs was £213,869, of which £185, was the proportion due to the Colony.

Subsidies for mail contracts.

The Government of the Colony pays an annual subsidy £12,115 to the submarine cable companies; and for the carri of mails and parcels, coming under the parcels post arrangeme a sum of £73,071 was also paid to the Peninsular and Orien Orient, American, and other steam companies carrying mails Europe. Throughout the principal parts of the country the m are carried by the railway authorities, and, where no commun tion exists by rail, by contract with the proprietors of coach lines. In more remote districts, where there are no lines coaches established, as on the sheep and cattle stations of the interior, a service has been organized by means of horsemen, ct with the Government to carry the mails to the furthest . The newspapers published in the Colony are carried free rge by the postal authorities, and newspaper literature forms large part of the mental pabulum of the ordinary bushman. ollowing return shows the operations of the Post Office during irteen years ending 31st December, 1888.

Details of working.

Number of Offices, Employés, Income, Expenditure, &c., of New South Wales Post Office.

Number of Post Offices.	Number of Receiving Offices.	Number of Persons Employed.	Number of Miles travelled by Mail Conveyance.	Extent of Postal Lines in Miles.	Income.	Approximate Expenditure.
					£	£
782	18	1,090	3,891,906	18,418	128,642	206,799
810	48	1,180	4,095,530	19,508	154,171	226,305
847	75	1,272	4,389,925	20,176	155,622	248,217
884	101	1,452	4,776,925	21,368	171,367	263,788
927	119	1,536	5,246,373	22,427	194,084	268,128
973	155	1,691	5,467,182	23,094	205,446	273,451
1,005	169	1,824	5,861,317	23,923	229,911	288,186
1,046	188	1,960	6,264,300	25,162	261,813	326,674
1,085	206	2,076	6.509,446	26,430	289,192	351,254
1,115	202	2,155	6,621,996	26,683	316,172	375,965
1,157	217	2,307	6,891,200	27,094	330,591	396,710
1,167	263	2,363	7,015,600	27,514	342,094	426,587
1,203	288	2,501	7,144,500	28,160	368,956	415,392

ese figures show that the Postal Department is carried on at rly loss to the State of several thousand pounds. This loss arked the operations of the department for many years, and to the wide area over which the population is scattered ghout the country, thus considerably increasing the cost of ge of the mails, as well as to the fact that newspapers, which the bulk of the mail matter, are carried free. It is held, theless, that the public must be served at any price, and the nd regular despatch and delivery of mails is an item of too importance in the political, commercial, and social life of the y to be neglected, even if its efficiency is obtained at the f an annual loss to the revenue. An idea of the magnitude work discharged by the New South Wales Post Office may thered from the following return :—

Postal business carried on at a loss.

Letters, Newspapers, &c., passing through the Post Office of New South Wales.

Year.	Number of Letters.		Number of Newspapers.		Packets and Book Parcels.		Total.		
	Foreign.	Inland and town.	Foreign.	Inland.	Foreign.	Inland.	Letters.	Newspapers.	Packets, &c.
1876	1,852,400	12,614,500	1,508,300	5,408,900	109,500	304,400	14,466,900	6,917,200	413,900
1877	1,979,500	14,529,500	1,652,000	6,733,000	135,000	263,600	16,509,000	8,385,000	398,600
1878	2,220,600	15,939,300	1,657,600	7,811,600	133,100	403,700	18,159,900	9,469,200	536,800
1879	2,442,700	16,964,600	2,020,000	9,447,100	136,300	459,200	19,407,300	11,467,100	595,506
1880	2,776,000	18,956,500	2,381,200	11,409,800	146,600	565,000	21,732,500	13,791,800	711,600
1881	3,159,400	23,196,200	2,726,400	13,801,500	180,500	670,800	26,355,600	16,527,900	851,300
1882	3,589,200	25,737,300	2,720,600	15,361,700	218,600	1,044,200	29,326,500	18,082,300	1,262,800
1883	4,168,100	31,258,300	3,014,500	16,562,800	269,700	1,379,200	35,426,400	19,577,300	1,648,900
1884	4,947,200	37,289,800	3,689,600	21,373,900	316,200	2,705,900	42,237,000	25,063,500	3,022,160
1885	5,328,200	34,023,000	3,987,900	21,579,500	552,600	2,894,200	39,351,200	25,567,400	3,446,800
1886	5,582,700	37,267,200	4,276,300	25,256,100	865,800	3,983,000	42,849,900	29,532,400	4,848,800
1887	5,624,000	39,221,900	4,744,400	*29,437,200	980,800	4,549,900	44,845,900	*34,181,600	5,530,700
1888	6,202,800	42,783,200	5,255,000	28,500,400	1,041,600	5,560,300	48,986,000	33,755,400	6,601,900

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* T[illegible] for this year are those supplied by the newspaper proprietors, and are probably too high. There has, in reality, been a steady increase since 1880 in the number of newspapers passing through the Post Office.

Increase of Postal business.

rowth of the business of the Postal Department within ten years has been very remarkable. The increase in the of letters despatched—viz., from 16,509,000, in 1877, to 00, in 1888,—is certainly considerable, but is not nearly so the increase in the number of newspapers and packets by the Post Office, which in the former case rose from 0, in 1877, to 33,755,400, in 1888; and in the latter, 8,600, to 6,601,900, in 1888. Compared with the other s of Australasia and with the United Kingdom, New Wales appears with considerable advantage in regard to ber of letters and newspapers received per head of popu- s may be seen from the following table :—

Country.	Number delivered per head of population.	
	Letters.	Newspapers and packets.
th Wales*	46	32
	45	29
nd*	34	32
stralia*	54	28
Australia*	26	33
*	32	33
land*	58	58
sia*	42	33
Kingdom	39	14
and Wales	44	15
	32	14
	19	7

* Year 1888. Others, 1887.

Telegraphic business.

telegraph lines also show a proportionate increase in the of telegrams transmitted and the amounts received for e, as illustrated in the following table, which gives an the business of the Telegraph Department from 1877 to

Electric Telegraphs.

Year.	No. of Stations.	No. of Telegrams.	Total Receipts.	*Revenue received.	No. of miles of Wire.	Cost of construction.
			£	£		£
1877	190	1,001,884	96,358	65,645	9,761	343,973
1878	236	1,132,287	98,125	76,227	11,760	413,258
1879	273	1,175,218	103,033	80,490	12,426	437,120
1880	289	1,319,537	123,172	84,110	13,188	462,226
1881	318	1,607,206	125,336	98,665	14,278	492,211
1882	345	1,965,931	153,555	120,266	15,901	536,400
1883	368	2,107,288	165,276	134,643	17,272	564,316
1884	394	2,334,052	176,261	146,386	18,681	601,460
1885	404	2,625,992	191,192	155,074	19,864	641,669
1886	425	2,661,126	184,053	158,128	20,787	666,028
1887	434	2,876,504	187,858	164,511	21,444	684,600
1888	460	3,410,407	213,869	185,965	22,219	704,912

* Proportion of receipts due to the Colony.

Construction in various countries.

The state of telegraphic construction in the principal countries of the world is given below. The figures are interesting, though the circumstances of Australasia and the older countries are so dissimilar as to make comparison between them more curious than valuable.

Length of Telegraph Lines in various Countries.

Country.	Length in Miles—		Country.	Length in Miles—	
	Of Lines.	Of Wires.		Of Lines.	Of Wires.
Australasia	39,205	76,358	India, British.. ...	28,400	92,350
Argentine Republic	14,588	24,410	Italy	19,110	68,065
Austro-Hungary ..	35,657	105,570	Japan	5,815	17,440
Belgium..............	3,800	17,900	Mexico	20,410	33,000
Brazil................	6,650	11,475	Netherlands	3,002	10,500
			Portugal	3,115	7,330
Canada, Dominion of................	25,835	50,350	Russia...............	69,530	157,922
Chili	10,640	25,500	Spain	11,715	28,280
Denmark	2,500	7,000	Sweden & Norway	10,007	23,15
France	61,286	220,870	Switzerland	4,648	9,2
Germany	63,235	252,485	Turkey ,............	14,800	27,21
Great Britain and Ireland...........	30,065	172,015	United States of America.........	241,536	744,
Greece	4,230	5,180			

PART XVI.

Law and Crime.

law of New South Wales permits proceedings against any erson charged with crime to be initiated either by arrest nmons. During 1888 there were 69,052 cases dealt with agistrates ; in 42,579 of these the persons charged with vere arrested, and in 22,227 cases they were summoned olice ; while in the remaining 4,246 cases proceedings en by private persons.

ARRESTS.

Persons brought before magistrates.

69,052 persons brought before the magistrates of the 7,627 were dealt with summarily, and convictions recorded 5 cases ; while 16,751 cases were dismissed either on their r for want of prosecution ; in the remaining cases, 1,425 er, the persons concerned were committed for trial in the ourts of the Colony. Dividing the offences into three sub- —those committed against the person, those against pro- d offences against good order or government—the numbers s brought before the Magistrates' Courts, and the manner they were dealt with during 1888, were as follows :—

Number of Persons dealt with by Magistrates.

ffences.	Total number of persons brought before the Magistrates' Courts.	Number of persons.			
		Discharged for want of prosecution or want of evidence.	Whose cases were dismissed on the merits.	Summarily convicted.	Committed for trial.
he person........	9,055	2,376	1,526	4,779	374
roperty	9,134	2,207	1,324	4,669	934
es*	50,863	5,956	3,362	41,428	117
er of persons sum- apprehended......	69,052	10,539	6,212	50,876	1,425

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* Not including cases brought up for lunacy.

Summary convictions.

Civil actions are not included in the above table, but it includes arrest or summonses for breaches of various Acts, and for other offences, which, from a moral point of view, are not to be reckoned as crimes, although they are such in the eyes of the law. The total number of summary convictions for all offences shows a considerable decrease during 1888, being 50,876 as compared with 53,614 in the previous year; for, although there was an increase in the number of persons convicted of offences against property, the number found guilty of offences against good order was much less than for many years past, while the offences committed against persons, though slightly more numerous than in 1887, were otherwise less than in any year since 1877. The following table gives the number of summary convictions before magistrates during the past twelve years :—

Summary Convictions before Magistrates.

Year.	Offences against the person.	Offences against property.	Other Offences.	Year.	Offences against the person.	Offences against property.	Other Offences.
1877	4,567	2,788	25,648	1883	6,257	3,395	45,811
1878	5,014	3,087	29,823	1884	5,810	3,594	48,502
1879	4,885	3,217	30,726	1885	5,159	3,649	50,537
1880	5,151	3,286	33,768	1886	5,187	3,676	53,405
1881	5,239	3,453	42,438	1887	4,667	3,876	45,071
1882	5,350	4,014	40,762	1888	4,779	4,669	41,428

Arrests by police.

The number of arrests made by the police was less during 1888 than in either of the five previous years, and the percentage of the whole population was the smallest yet recorded.

Arrests by Police.

Year.	Arrests.	Proportion of whole population.	Year.	Arrests.	Proportion of whole population.
1877	28,349	4·50	1883	43,177	5·17
1878	30,718	4·66	1884	46,199	5·24
1879	32,860	4·75	1885	48,261	5·18
1880	35,774	4·92	1886	48,854	4·99
1881	41,402	5·44	1887	44,094	4·31
1882	39,758	5·00	1888	42,579	4·00

he number of police in the Colony during the years 1884-88 was

Number of Police.

Year.	Metropolitan.	Country.	Total.
1884	423	947	1,370
1885	466	977	1,443
1886	476	986	1,462
1887	502	989	1,491
1888	518	995	1,513

he protection of life and property does not form the whole of duty performed by the police in this Colony; on the contrary, ry large portion of their time is taken up with administrative es, such as the collection of the electoral rolls, the agricultural stock schedules, and returns of works and manufactories; in y instances, too, the police act as Clerks of Petty Sessions and ing Wardens, and fill other offices having no direct connection n police duties. The test sometimes applied as to the law-ling character of the population of the different colonies, as uced from the apparent number of persons protected by one ce officer, is entirely worthless unless the circumstances of the ies performed and the diverse areas of the colonies are made nents of such comparison. The numbers of police in the icipal colonies, and the proportion to the civilian population, however given in the following table for what they may be th :—

Police in different Colonies.

Colony.	Number of Police.	Proportion of Civilians to one Police.
r South Wales	1,513	717
oria	1,361	761
ensland	906	405
th Australia	404	786
r Zealand	741	783

comparison of cities is given below, and it would appear that lney and Melbourne have proportionately less police supervision n the majority of places enumerated in the list. This however, of itself, argues nothing in favour of the law-abiding character of the population of the two cities named, but rather that an increased number of police could with advantage be added to the force now employed for their protection :—

Cities.	Strength of Police.	Population to each Police Constable.	Cities.	Strength of Police.	Population to each Police Constable.
Sydney	518	692	New York	3,174	472
Melbourne	555	717	Philadelphia.....	1,624	643
Brisbane............	163	340	Chicago............	1,050	810
Adelaide............	217	513	Brooklyn	777	975
London	14,081	389	St. Louis	502	900
Glasgow	1,093	503	Baltimore.........	575	765
Edinburgh	500	500	Boston	780	540
Manchester	940	401	San Francisco ...	404	790
Belfast	800	287	Cincinnati........	388	909

Ages and offences of persons arrested.

The ages of persons arrested for various classes of offences during the year 1888 are given below. It will be seen that the most serious offences were committed by persons between the ages of 20 and 30, while those against good order, consisting chiefly of drunkenness, were committed by persons from 30 to 50 years.

Ages of Persons Arrested.

Offences.	Ages of persons apprehended.							Total apprehensions.
	Under 15	15–20	20–30	30–40	40–50	50–60	Over 60	
Against the person	24	248	1,251	638	356	163	63	2,743
Against property, with violence......................	24	75	183	57	23	6	2	370
Against property, without violence......................	427	726	1,819	1,202	598	307	122	5,201
Forgery and offences against the currency ...	...	13	69	53	7	11	10	163
Against good order, including drunkenness ...	521	1,588	8,607	8,613	6,871	3,795	2,067	32,062
Not included in the preceding	25	120	702	524	395	203	71	2,040
Total	1,021	2,770	12,631	11,087	8,250	4,485	2,335	42,579

e number of arrests of persons at each period of life, with ception of under 15 years, was less than in 1887. The s of juvenile offenders were much larger than in any former

Ages of offenders.

The proportion of offences committed at the respective ages en below. It will seen that the percentage of offenders 15 years is much higher than in any year embraced by the

ercentage of Arrests at various Ages to Total Arrests.

	Years 10-15.	Years 15-20.	Years 20-30.	Years 30-40.	Years 40-50.	Years 50-60.	Years over 60.
9	2·19	6·76	28·22	27·93	19·17	9·33	6·40
0	2·12	6·94	29·24	26·90	18·69	9·77	6·34
1	2·11	5·43	28·98	27·22	20·31	9·74	6·21
2	1·93	4·83	27·82	26·58	20·79	10·69	7·36
3	1·94	5·80	28·98	26·08	20·45	10 40	6·35
4	1·68	5·81	29·51	26·02	20·35	10·61	6·01
5	1·73	5·38	30·25	26·47	20·42	9·77	5·98
6	1·64	5·90	29·98	26·13	20·54	10·28	5·53
7	1·88	6·29	29·82	26·86	19·50	10·17	5·48
8	2·40	6·51	29·70	26·07	19·39	10·55	5·48

Absence of serious crime amongst native-born population.

e native-born population of New South Wales probably num- ot less than 64 per cent. of the whole, while the persons ed during 1888 who were born in the Colony numbered 2 out of a total of 42,572 arrests, or 32 per cent. In ction with this matter, however, it should be borne in mind he great bulk of the population under 15 years are also e born. The native countries of all persons apprehended g 1888 will be found in the following table, as well as the es for which the arrests were made :—

Birthplaces of Persons Apprehended, 1888.

Country.	Against the person.	Against property, with violence.	Against property without violence.	Forgery and offences against the currency.	Against good order, including drunkenness.	Not included above.	Total.
New South Wales	1,097	224	2,251	48	9,425	577	13,622
Other Australian Colonies	225	44	462	31	1,950	129	2,841
England	509	43	1,057	48	7,093	504	9,254
Ireland	449	28	671	15	8,445	356	9,964
Scotland	175	8	212	5	2,668	128	3,196
Other British possessions	44	4	87	3	419	54	611
France	16	1	37	1	185	16	256
Germany	34	2	80	2	349	64	531
China	76	5	90	2	266	44	483
Other foreign countries	118	11	254	8	1,262	168	1,821
Total	2,743	370	5,201	163	32,062	2,040	42,579

The nominal religious profession of each person arrested is ertained and entered in the charge-sheet. During 1888 the ests of persons belonging to each of the various denominations re :—

Nominal religious professions of prisoners.

Religion.	Against the person.	Against property, with violence.	Against property, without violence.	Forgery and offences against the currency.	Against good order, including drunkenness.	Not included above.	Total.
Church of England....	1,041	119	2,258	88	11,596	848	15,950
Presbyterians	183	18	349	19	2,973	162	3,704
Wesleyans...............	47	8	156	4	511	39	765
Independents	3	1	5	....	24	1	34
Baptists.....	13	3	22	1	108	11	158
Other Protestants......	40	2	76	....	478	50	646
Roman Catholics	1,229	204	2,068	43	14,909	751	19,204
Jews	9	1	42	2	51	14	119
Pagans	68	2	80	3	269	42	464
Other persuasions, or religion unknown...	110	12	145	3	1,143	122	1,535
Total.........	2,743	370	5,201	163	32,062	2,040	42,579

Education of persons arrested.

The degree of education of those who were arrested has also been obtained as far as possible. Four grades of education are adopted for classification purposes, and the number comprised in each class during the years from 1876 to 1888 is given below.

Degrees of Education of Persons Arrested.

Year.	Neither read nor write.	Read only.	Read and write.	Superior education.	Total arrests
1876	3,841	1,320	21,832	....	26,993
1877	3,842	1,269	23,238	.. ..	28,349
1878	4,017	1,529	25,172	....	30,718
1879	3,493	1,230	27,984	153	32,860
1880	4,065	1,197	30,350	162	35,774
1881	4,034	1,123	36,083	162	41,402
1882	4,059	964	34,553	182	39,758
1883	3,859	1,058	38,071	189	43,177
1884	3,871	1,096	41,030	202	46,199
1885	3,925	937	43,185	214	48,261
1886	4,142	916	43,588	208	48,854
1887	3,873	709	39,295	217	44,094
1888	3,730	848	37,734	267	42,579

Effect of education on crime.

A superficial glance at the figures would seem to show that the progress of education has not been attended with that decrease in crime, which the friends of education confidently assert follows in its train. This view of the case is quite untenable, for although the proportion of persons arrested who can read and write has much increased of late years, such increase is due to the spread of education, even amongst those whose environment offers inducement to the commission of crime.

The following table gives the percentage of persons arrested of each degree of education from 1877 to 1888 :—

Year.	Neither read nor write.	Read only.	Read and write.	Year.	Neither read nor write.	Read only.	Read and write.
1877	13·55	4·47	81·98	1883	8·93	2·45	88·[illegible]
1878	13·07	4·97	81·96	1884	8·37	2·37	89·[illegible]
1879	10·62	3·74	85·64	1885	8·13	1·94	89·[illegible]
1880	11·36	3·34	85·30	1886	8·49	1·87	89[illegible]
1881	9·74	2·71	87·55	1887	8·78	1·61	89[illegible]
1882	10·20	2·42	87·38	1888	8·76	1·99	89[illegible]

he best proof of the effect of the spread of education on crime e notable decrease in the number of committals and convictions serious offences, which has for many years been observable. ough the direct effect of the spread of enlightenment cannot be rwise gauged, there is ample evidence to warrant the assumption education is doing its work as an active leaven throughout the nunity.

Effect of education on crime.

le question of the relative prevalence of drunkenness, as d by the number of persons arrested for that offence in the rent colonies, has received of late no little attention, and it ld appear that New South Wales in this regard holds a bad minence. The total arrests for drunkenness and the number 1,000 of population in the different colonies, for the latest lable years, were :—

Drunkenness.

Arrests for Drunkenness in Australian Colonies.

	Total Arrests.	Arrests, per 1,000 of population.
*New South Wales	21,129	19·8
Victoria	15,578	15·3
Queensland	6,000	16·9
South Australia	2,152	6·9
Tasmania	1,192	8·5
New Zealand	5,661	9·5

* 1888. Other Colonies, 1887.

lese figures are entirely misleading as far as their application le question of the comparative sobriety of the different colonies ncerned, and if they convey any meaning at all, it is that the gency of the laws, or their administration, is greater in New h Wales than in any other colony. The proof of this is not o seek. The consumption of intoxicants per head is largest ictoria, which stands third as regards arrests for drunkenness, ill be seen from the following table.

Deduction from number of arrests misleading.

Consumption of intoxicants in the various Colonies.

Consumption of Intoxicating Drink.

Colony.	Average consumption per head.			
	Spirits.	Beer.	Wine.	Total equivalent in alcohol (proof)
	Gallons.	Gallons.	Gallons.	Gallons.
New South Wales*..	1·10	11·01	0·76	2·88
Victoria*...............	1·24	19·41	1·14	4·10
Queensland	1·75	9·79	0·56	3·21
South Australia	0·46	14·11	1·58	2·77
New Zealand	0·77	7·65	0·20	1·83
Tasmania	0·62	9·67	0·19	1·93
Australasia............	1·03	12·33	0·77	2·85

* 1888. Other colonies, 1887.

New South Wales and Victoria compared.

The administration of the law appears to be very different in Victoria from that in New South Wales, as will appear from the nature of the offences with which persons apprehended were charged. Thus in 1887 the following were the arrests in each Colony:—

	New South Wales.	Victoria.
Drunkenness..........................	17,285	Nil.
Habitual drunkenness	119	59
Drunkenness and disorder	5,302	15,519
Total	22,706	15,578

These figures at once dispose of the theory so persistently put forward as to the excessive prevalence of drunkenness in New South Wales, and the more effectually when it is borne in mind that the number of males engaged in laborious work is far larger here than in any other colony.

Arrests for drunkenness in towns.

The persons arrested for drunkenness are chiefly residents in or near large towns, and it is only natural to expect that, with an increase in the number and population of the towns, there will be an increase in the arrests for drunkenness. The number of arrests during each year since 1878 is shown in the following table, and it will be satisfactory to note the great decrease in the percentage of females arrested. And as the proportion of males arrested has maintained a high percentage for many years, due possibly to the greater increase in the urban than in the rural population, and consequently the larger number of persons whose inebriety has

Female drunkards decreasing.

General decrease in drinking habits.

me under the attention of the local police, it is very gratifying find a considerable decrease in 1888, both of the total number d the percentage to the population. Much stress cannot, hower, be laid on the falling off in the arrests, if there were not her evidence of the decrease of drunkenness; as a word of struction from the Inspector-General of Police could, according its tenor, increase or decrease the number of those apprehended on this charge. The decline in arrests apparently follows marked decrease in the consumption of intoxicants, so that it ay be fairly assumed that drunkenness is on the wane.

Persons Arrested for Drunkenness, with percentage of Total Population.

Year.	Total arrests.	Males.	Females.	Percentage of total arrests to whole population.	Percentage of males arrested to total male population.	Percentage of females arrested to total female population.
1878	17,224	13,116	4,108	2·61	3·67	1·37
1879	17,715	13,574	4,141	2·56	3·61	1·31
1880	18,777	14,801	3,976	2·58	3·72	1·21
1881	22,560	18,200	4,360	2·96	4·36	1·26
1882	21,393	17,574	3,819	2·69	4·03	1·06
1883	23,178	19,244	3,934	2·77	4·21	1·04
1884	24,438	20,261	4,177	2·77	4·19	1·04
1885	26,291	21,944	4,347	2·82	4·29	1·03
1886	26,310	21,879	4,431	2·69	4·06	1·01
1887	22,706	19,229	3,477	2·22	3·42	0·76
1888	21,129	17,438	3,691	1·98	2·97	0·77

Consumption of spirits per head.

The quantity of spirits consumed per head of population in 1888 was hardly 75 per cent. of the consumption nine years previously, and the decline has been fairly regular, as will be seen from the following table:—

Consumption of Spirits per Head.

Year.	Imported.	Colonial.	Total.	Year.	Imported.	Colonial.	Total.
	Gallons.	Gallons.	Gallons.		Gallons.	Gallons.	Gallons.
1879	1·49	·011	1·50	1884	1·41	·020	1·43
1880	1·37	·017	1·39	1885	1·29	·015	1·30
1881	1·45	·008	1·46	1886	1·19	·010	1·20
1882	1·45	·012	1·46	1887	1·10	·015	1·11
1883	1·43	·024	1·45	1888	1·08	·016	1·10

Consumption of intoxicants decreasing.

There has also been, in all probability, a falling off in the amount of beer and wine consumed, but the statistics which would illustrate this view are available for only a few years. The total amount of intoxicants consumed in the Colony can best be compared by reducing the various kinds of drink to the common level of proof spirit. The average consumption of spirit per inhabitant during the years 1883–88 was—

Year.	Gallons
1883	3·52
1884	3·53
1885	3·37
1886	3·23
1887	2·97
1888	2·88

Decrease in drunkenness

The number of persons who render themselves liable to arrest may be fairly assumed to be in direct proportion to the amount of intoxicants consumed, and a decrease in consumption is necessarily a sign of increased sobriety.

Habitual drunkenness.

The offence of habitual drunkenness has declined perceptibly, as will be seen from the following table, showing the number of persons arrested, with percentage of arrests to total arrests for drunkenness, 1879–88. It will be seen that fewer persons were arrested during 1888 than in any year shown by the table.

Habitual Drunkenness.

Year.	Number.	Percentage of arrests to total arrests for drunkenness.	Year.	Number.	Percentage of arrests to total arrests for drunkenness.
1879	136	0·76	1884	108	0·44
1880	107	0·56	1885	116	0·44
1881	101	0·54	1886	113	0·43
1882	141	0·65	1887	119	0·52
1883	100	0·43	1888	80	0·38

PUNISHMENTS.

Punishments inflicted by magistrates.

Of the 69,052 persons brought before the magistrates of the Colony during 1888, 50,876 were summarily convicted, and of these 4,388 were imprisoned without the option of a fine, while

Nature of punishments inflicted.

wo were whipped. In the great majority of cases fines were nflicted, or imprisonment with the option of paying a fine nstead. The nature of the punishments, with the offences for hich they were awarded, are given in the following table, for he year 1888.

Number of Summary Convictions, Nature of Offences and of Punishments inflicted by Magistrates.

Punishment.	Total number of punishments.	For offences against the person.	For offences against property.	For other offences.
Fine, levy and distress	27,336	2,846	1,848	22,642
Fine or surety, or in default, imprisonment	17,337	1,056	718	15,563
Peremptory imprisonment ...	4,388	460	1,950	1,978
Whipping	1	.. ..	....	1
Imprisonment, with whipping	1	....	....	1
Bound over, with or without sureties........................	279	167	30	82
Other punishments..............	1,534	250	123	1,161
Total..................	50,876	4,779	4,669	41,428

Cases in which fines were inflicted.

The number of persons fined, with the alternative of imprisonment, was 17,337; and of these 8,409 availed themselves of the option of paying the fine. The remaining 8,928 suffered imprisonment, in addition to 4,388 sentenced to peremptory imprisonment, making a total of 13,316 persons imprisoned, out of 50,876 summarily dealt with by the magistrates, or 26 per cent. Adding 27,336, the number fined (levy and distress) to 8,409, the number who paid rather than be incarcerated, gives 35,745 as the total number of fines paid during the year.

Decrease in committals for trial.

Omitting from consideration summons cases, and dealing only with arrests by the police, three facts are noticeable—that the percentage of arrests to the total population has fluctuated consider-

Convictions increasing.

ably during the past ten years, though there has been a decided tendency towards decrease of late years; that the number of convictions obtained is now proportionately greater than formerly; and that the number of committals for trial to the superior courts shows a remarkable tendency to decrease. The following table gives the average for twelve years:—

Proportion of Convictions and Committals in Magistrates' Courts, compared with Arrests.

Year.	Arrests.	Summarily convicted.	Summarily acquitted or discharged.	Committals
	Percentage of arrests to the whole population.	Percentage of summary convictions to total arrests.	Percentage of those acquitted or discharged to total arrests.	Percentage to total arrests.
1877	4·50	73·09	22·07	4·83
1878	4·66	75·58	18·94	5·48
1879	4·75	77·63	17·52	4·85
1880	4·92	76·94	18·36	4·70
1881	5·44	79·86	16·29	3·85
1882	5·00	78·94	17·07	3·99
1883	5·17	82·08	14·26	3·66
1884	5·24	80·99	15·59	3·42
1885	5·18	82·89	14·07	3·04
1886	4·99	82·24	14·79	2·97
1887	4·31	81·57	15·33	3·10
1888	4·00	79·89	16·77	3·34

Decrease in committals for trial.

The proportion of offences deemed of sufficient gravity to be tried by a jury has largely decreased during the past twenty-five years, and the proportion of prisoners convicted also shows a substantial reduction. This will be plainly seen from a consideration of the following table.

Committals and Convictions in Superior Courts.

Year.	Committals for trials.	Convictions.	Proportion of population committed.	Proportion of population convicted.
			Per 10,000 of population.	Per 10,000 of population.
1861	820	437	23·2	12·3
1862	879	514	24·2	14·1
1863	887	497	23·8	13·3
1864	975	590	25·3	15·3
1865	1,123	686	27·7	19·9
1866	1,255	770	29·9	18·3
1867	1,180	702	27·0	16·0
1868	1,006	601	22·1	13·2
1869	1,112	682	23·5	14·4
1870	1,037	601	21·1	12·2
1871	1,084	628	21·3	12·3
1872	1,073	643	20·3	12·2
1873	1,166	647	21·4	11·8
1874	1,311	700	23·2	12·4
1875	1,245	707	21·2	12·0
1876	1,391	822	23·0	13·6
1877	1,411	829	22·4	13·1
1878	1,740	959	26·4	14·5
1879	1,743	1,090	25·2	15·7
1880	1,717	1,148	23·6	15·8
1881	1,626	1,058	21·3	13·9
1882	1,724	1,065	21·6	13·4
1883	1,606	1,008	19·2	12·0
1884	1,550	928	17·5	10·5
1885	1,540	785	16·5	8·4
1886	1,594	957	16·2	9·7
1887	1,402	854	13·7	8·3
1888	1,561	915	14·7	8·6

Convictions of persons committed.

It will be seen that the number of convictions obtained in 1888 averaged not more than 58·62 per cent., while for the past twelve years the proportion convicted or discharged, per hundred sons committed for trial, was as follows :—

Percentage of Convictions.

Year.	Percentage of committals.		Year.	Percentage of committals.	
	Convicted.	Acquitted or discharged.		Convicted.	Acquitted or discharged.
1877	58·75	41·25	1883	62·76	37·24
1878	56·11	44·89	1884	59·87	40·13
1879	62·54	37·46	1885	50·97	49·03
1880	66·86	33·14	1886	60·04	39·96
1881	65·07	34·93	1887	60·91	39·09
1882	61·77	38·23	1888	58·62	41·38

Causes of apparent high rate of crime.

The convictions in the higher courts of New South Wales, taken over a series of years, greatly exceed, both in number and in proportion, those of any other Colony. So marked is this fact that much speculation has been indulged in as to the probable cause of the anomaly. It is admitted that the people of all the colonies are practically derived from the same stock, while their occcupations are fairly alike, and a theory has been hazarded that the high rate of crime in New South Wales is due to a blood taint derived from the original bond-population of this Colony. Such theory is manifestly erroneous, as Tasmania, the colony which received proportionately the largest number of convicts, and whose population has been least diluted by immigration, has now and for many years the most favourable record of convictions.

Gold-fields attracted criminal population.

Besides this, Victoria stands second lowest on the list, and there is every testimony that the large gold-finds of that colony, in the years succeeding the final cessation of transportation, attracted the worst classes of all these settlements, especially of New South Wales and Tasmania. There is, however, no evidence that such a population now exists anywhere in these colonies: it certainly does not exist in New South Wales. But, though the gratuitous theory above alluded to may be easily disposed of, the fact remains that the largest proportion of convictions in the higher courts occurs in New South Wales, as the following table shows:—

Convictions after Trial in Australasian Colonies.

		Per 10,000 of population.
New South Wales*	915	8·60
Victoria	506	4·96
Queensland	247	6·96
South Australia	208	6·65
Tasmania	56	4·00
New Zealand	334	5·60

* 1888; other Colonies, 1887.

Western Australia has been omitted from the comparison, as its sparse population and peculiar situation would warrant the anticipation of a large amount of crime of a kind not found in the older settled colonies.

Criminals come from floating population.

There has been in New South Wales for many years a large population whose abode in any district is determined by the existence of a demand for unskilled labour, and it is from the ranks of this floating population that a large proportion of the persons convicted of crime is derived. All the colonies have, to a greater or less extent, this class of population; but in New South Wales it is numerically the largest. As these people settle down to regular employment in a fixed abode and acquire interests apart from the excitements of an unsettled life, crime will be found to diminish. The neighbouring colony of Victoria, where the decrease of convictions has steadily kept pace with the settlement of its population, may be cited as an example of this truth, the proportion of convictions being now reduced to about 4·96 per ten thousand, as compared with 10·1 in 1866.

Strict administration of law in N. S. Wales.

The laws relating to crime are somewhat similar in all the colonies; but the administration of these laws may possibly be more rigorous in New South Wales than in any other colony. This has already been shown to be the case in regard to drunkenness, and offers an additional explanation of the large number of convictions obtained in New South Wales.

Capital punishment.

Executions have been less numerous of late years than formerly, the death penalty being awarded in only a small proportion of cases wherein the death sentence has been pronounced. The number of executions for thirteen years is given below.

Number of Criminals Executed.

Year.	Number.	Year.	Number.	Year.	Number.
1876	4	1881	2	1886	2
1877	2	1882	3	1887	4
1878	1	1883	1	1888	2
1879	1	1884	2		
1880	4	1885	3		

aol ccommo-ation.

There are in New South Wales 57 gaols of all kinds; of these 37 are distinguished as police gaols. There is accommodation for 1,770 prisoners in separate cells, and for 4,612 when more than one prisoner sleeps in a cell. On the 31st December, 1888, there were 2,353 prisoners in confinement, thus distributed.

Prisoners and Prison Accommodation.

Prisons.	Prisoners.	Accommodation—one prisoner per cell.	Accommodation—more than one prisoner per cell.
Gaols	2,135	1,573	3,880
Police Gaols	218	197	732
Total..................	2,353	1,770	4,612

ecrease f prisoners.

The total number of prisoners received into the various gaols throughout the Colony during the year 1888 was 18,050—a lesser number than in either of the five previous years. More than half of these were received at Darlinghurst Gaol, Sydney. As many were detained for only short periods the above total may appear large compared with the average number in confinement at any one time. The following table gives the number of prisoners received into gaol from 1882 to 1888.

Prisoners Received into Gaol.

Year.	Under sentence.		Trial, &c.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1882	10,326	3,918	2,762	407	13,088	4,325	17,413
1883	11,309	4,096	2,740	421	14,049	4,517	18,566
1884	12,836	4,161	2,988	413	15,824	4,574	20,398
1885	13,045	4,324	2,808	509	15,853	4,833	20,686
1886	12,650	4,382	3,003	539	15,653	4,921	20,574
1887	11,554	3,728	3,006	499	14,560	4,227	18,787
1888	10,519	3,712	3,364	455	13,883	4,167	18,050

Prisoners in confinement.

The average number of persons in confinement during the year has not been ascertained, but the number in detention at the close of each year is known, and the figures for the past thirteen years will be found below. Prisoners have been classified under two heads—those under sentence, and those awaiting trial. The respective numbers of each of these classes for the period named were:—

Prisoners in Confinement at the close of each year.

Year.	Total persons in confinement.	Male.	Female.	*Under sentence.			Awaiting trial.		
				Male.	Female.	Total.	Male.	Female.	Total.
1876	1,490	1,267	223	1,154	203	1,357	113	20	133
1877	1,521	1,293	228	1,137	209	1,346	156	19	175
1878	1,781	1,512	269	1,318	251	1,569	194	18	212
1879	1,951	1,641	310	1,465	291	1,756	176	19	195
1880	2,121	1,759	362	1,610	349	1,959	149	13	162
1881	2,075	1,753	322	1,611	309	1,920	142	13	155
1882	1,935	1,646	289	1,497	274	1,771	149	15	164
1883	2,168	1,826	342	1,684	330	2,014	142	12	154
1884	2,464	2,115	349	1,966	337	2,303	149	12	161
1885	2,559	2,222	337	2,084	328	2,412	138	9	147
1886	2,501	2,119	382	2,018	369	2,387	101	13	114
1887	2,380	2,053	327	1,919	316	2,235	134	11	145
1888	2,353	2,044	309	1,931	301	2,232	113	8	121

* Includes 9 debtors in 1888.

Classification of offences.

The prisoners under sentence may be divided into four classes according to the description of offence for which they were convicted, as in the following table:—

Offences of Prisoners under Sentence at close of each year.

Year.	Felony.		Petty larceny.		Assault.		Other offences.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1876	708	34	160	21	78	4	208	144
1877	798	57	81	16	32	3	226	133
1878	855	51	127	22	50	4	286	171
1879	911	42	176	29	70	21	308	199
1880	950	34	189	31	106	8	365	276
1881	825	18	201	15	78	5	508	271
1882	844	25	168	18	89	3	396	225
1883	802	47	263	26	138	15	481	242
1884	949	33	295	29	140	6	582	269
1885	1,047	33	307	47	162	10	568	226
1886	1,070	40	296	32	121	11	531	288
1887	1,042	30	221	28	137	3	519	255
1888	987	27	295	25	146	10	494	239

Felons under arrest.

The number of felons detained under sentence was larger in 1886 than in any year of the series, and, although 1888 presents a more favourable record than either of the three previous years, it will be seen by the above table that a notable increase has taken place since 1883. This advance does not denote an increase in crime—for, as already shown, serious crime is decreasing in the community—but points rather to longer sentences. The increase in the term served by prisoners is due to the Criminal Law Amendment Act, which came into force on the 1st day of July, 1883, but sufficient time has not elapsed since the passing of the Act to trace any effect from its operations, beyond the increase in the term which felons are required to serve. The following table shows the average time served by each prisoner sentenced for felony.

Average Term of Imprisonment served by Prisoners under Sentence for Felony.

Year.	Average sentence.	Year.	Average sentence.
	Years.		Years.
1877	1·55	1883	1·20
1878	1·39	1884	1·40
1879	1·27	1885	1·72
1880	1·21	1886	1·48
1881	1·15	1887	1·60
1882	1·22	1888	1·43

Ages of prisoners in gaols.

As in the case of the arrests, the largest number of prisoners at any age-period are those whose ages range from 20 to 30 years; but, proportionately to the numbers of the population, the ages of middle life, namely, from 30 to 50 years, are most productive of criminals. The following table gives, not only the number of offences committed by persons of various ages, but also the actual number of persons convicted at each age-period. From a combination of these figures the particulars given in the last column have been obtained, showing the average number of sentences inflicted on persons at various ages.

Ages of Persons sentenced to Imprisonment.

Ages.	Total Offences.			Distinct Offenders.			Average number of Convictions to each person.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Under 10	3	1	4	3	1	4	1·00	1·00	1·00
10–20	873	320	1,193	827	197	1,024	1·05	1·62	1·16
20–30	3,615	1,132	4,747	2,807	565	3,372	1·21	2·00	1·41
30–40	2,484	1,127	3,611	2,009	491	2,500	1·24	2·30	1·44
40–50	1,815	718	2,533	1,322	350	1,672	1·45	2·05	1·51
50 and upwards	1,729	414	2,143	1,299	225	1,524	1·33	1·84	1·41
Total.....	10,519	3,712	14,231	8,267	1,829	10,096	1·27	2·03	1·41

Female convictions larger than male.

The above table presents several remarkable features. The average number of convictions is considerably larger amongst females than amongst males, especially in the ages over 30 years. That there should have been even four children under 10 years of age imprisoned is at least anomalous, but it is probable that the practice of sending children to gaol will cease, now that provision is being made for such cases; for under no circumstance is it possible to conceive that a prison is a fit place for children of such tender years.

Depravity of female prisoners.

Female offenders are, as a rule, found to be more depraved than male, and in this respect New South Wales forms no exception to the general experience. The number of men convicted in 1887 was 8,033; of these 1,745, or 21·7 per cent., received more than one sentence. There were 1,573 women convicted, of whom 702, or 44·6 per cent., had previous convictions. The number of offences committed by the 1,745 males was 5,266, or about 3 per head, while by the 702 females re-convicted the offences numbered 2,857, or more than 4 per head. The following figures show the number of persons received into gaol more than once during 1887. (Later information is not available):—

Offenders convicted more than once.

Times convicted during 1887.	Males.		Females.	
	Offenders.	Offences.	Offenders.	Offences.
Twice	892	1,784	267	534
Thrice	381	1,143	164	492
Four or more times	472	2,339	271	1,831
Total	1,745	5,266	702	2,857

Convicted four or more times.

The record of those convicted four or more times is a peculiar feature of this table, and it would appear that 472 men were sent to gaol 2,339 times, or an average of 4·95 per man, while 271 women had recorded against them 1,831 imprisonments, or an average of 6·76 each, and these during the course of one year.

Extent of criminal class.

It is impossible to determine the extent of the criminal class in the Colony, or even the number of habitual criminals. The number of prisoners with previous convictions against them has, however, been ascertained, and is shown in the following table.

Prisoners with Previous Convictions.

Year.	Offenders with previous convictions.	Offences committed by prisoners with previous convictions.	Average number of convictions per prisoner.
1879	1,700	6,240	3·67
1880	1,680	6,596	3·92
1881	2,994	8,623	2·88
1882	3,210	7,836	2·44
1883	3,056	7,668	2·51
1884	3,209	7,942	2·47
1885	3,355	8,295	2·47
1886	3,188	8,150	2·56
1887	2,441	8,117	3·33
1888	2,550	6,685	2·62

Habitual offenders.

Some prisoners entered as having previous convictions were possibly sentenced in a previous year and had not two convictions in any one year. The averages therefore given in the last column are the minimum. The terms for which women are sentenced are much shorter, as their offences are much lighter than those of males. On the other hand there must, from the evidence of the above table, be a constant reappearance of the same faces before the Courts to account for so high an average of reconvictions. The proportion of habitual offenders, if those with previous convictions may be so termed, is remarkable, and will perhaps be better illustrated by the following table than even by the one just given :—

Year.	Percentage of prisoners with previous convictions sent to gaol.	Year.	Percentage of prisoners with previous convictions sent to gaol.
1879	19·54	1884	26·17
1880	19·39	1885	26·99
1881	29·44	1886	26·40
1882	33·38	1887	25·41
1883	28·31	1888	25·26

Reconvictions.

The numbers of prisoners reconvicted from 1875 to 1888 are given in the following table; they are arranged in classes according to the terms of their imprisonment.

Classification of Prisoners reconvicted.

Year.	1st Class. Sentence, 5 years and upwards.			2nd Class. Sentence, less than 5 years.			3rd Class. Sentence, imprisonment only.			Drunkards and petty offenders omitted from the foregoing.		
	Second conviction.	Third conviction.	Fourth, or more.	Second conviction.	Third conviction.	Fourth, or more.	Second conviction.	Third conviction.	Fourth, or more.	Second conviction.	Third conviction.	Fourth, or more.
1875	21	22	......	36	59	......	34	35	......	145	724	......
1876	19	40	......	56	86	......	25	44	......	169	1,027	......
1877	12	30	......	83	91	......	7	22	......	169	1,057	......
1878	10	27	......	51	66	......	17	28	......	1,150	2,178	......
1879	4	22	......	50	65	......	24	51	......	319	1,165	.....
1880	20	3	3	186	39	30	113	38	37	388	823	......
1881	8	3	4	107	54	63	98	43	16	1,014	488	1,096
1882	16	5	12	231	82	93	152	38	85	1,157	476	863
1883	53	4	9	257	50	64	75	20	31	955	579	959
1884	35	10	46	136	72	57	86	29	37	1,170	559	972
1885	20	19	29	133	81	72	101	38	35	1,337	579	911
1886	23	10	23	108	43	115	93	31	51	1,325	552	814
1887	18	6	28	113	52	74	79	13	20	1,018	443	577
1888	16	17	35	136	66	113	76	40	40	1,071	412	528

Previous to the year 1880 prisoners with four or more convictions are included with those convicted for the third time. The particulars in this table were obtained from the reports of the Comptroller-General of Prisons.

Refractory prisoners.

The chief punishment inflicted on refractory prisoners is solitary confinement. Formerly other modes of punishment were equally used, but of late years these have been to a large extent superseded. The number of punishments inflicted upon refractory prisoners is given below.

Refractory Prisoners.

Year.	Prisoners punished in gaols.			Percentage of total prisoners punished.
	Solitary confinement.	Other punishment.	Total.	
1877	501	395	896	8·23
1878	768	192	960	8·17
1879	1,061	284	1,345	10·16
1880	1,210	263	1,473	10·84
1881	1,225	332	1,557	9·85
1882	1,133	319	1,452	10·19
1883	1,249	268	1,517	9·84
1884	1,473	436	1,909	11·23
1885	1,435	399	1,834	10·56
1886	1,420	389	1,809	10·61
1887	1,445	416	1,861	12·18
1888	1,302	246	1,548	10·89

Debtors.

There were fifty-seven persons imprisoned for debt during the year 1888. And as the time of detention as a rule only extended for short periods, the number of debtors in confinement at any one time was not large. The figures for the last twelve years will be found in the following table:—

Debtors in Confinement.

Year.	Male.	Female.	Total.	Year.	Male.	Female.	Total.
1877	42	...	42	1883	27	1	28
1878	49	2	51	1884	61	3	64
1879	46	2	48	1885	50	2	52
1880	46	1	47	1886	61	1	62
1881	52	...	52	1887	48	2	50
1882	44	1	45	1888	56	1	57

Deaths in gaols.

The death-rate in gaols is very light, when the neglected state in which many of the prisoners are received is considered, and moreover shows signs of decreasing. No common ground of comparison exists between the death-rate in gaols and that of the general population. In the following table the number of deaths are given from 1878 to 1888, together with the death-rates per 1,000 of all prisoners under sentence during each year, and this includes those whose term had not expired at the close of the previous year.

Deaths and Death-rate in Gaol.

Year.	Deaths.			Death-rate per 1,000 persons of both sexes under sentence.
	Male.	Female.	Total.	
1878	39	7	46	4·39
1879	36	7	43	4·10
1880	37	...	37	3·48
1881	53	7	60	4·88
1882	40	6	46	3·92
1883	30	5	35	2·75
1884	35	4	39	2·70
1885	39	11	50	4·01
1886	38	10	48	3·27
1887	30	8	38	3·13
1888	30	5	35	2·80

THE SUPREME COURT.

Judges of the Supreme Court.

The chief legal tribunal of the Colony is the Supreme Court, which is at present composed of seven judges—that is, one Chief Justice, and six puisne Judges. Civil actions are usually tried by a jury of four persons, but either party to the suit, on cause shown, may apply to a Judge in Chambers to have the cause tried by a jury of twelve. Twice the number of jurors required to sit on the case are chosen by ballot, from a panel summoned by the Sheriff, and from that number each of the parties strikes out a fourth, the remainder thus selected by both parties forming the jury who are to try the case. This jury are constituted the judges of the facts of the case only, being bound to accept the dicta of the Judge on all points of law. From the court thus constituted an appeal lies to what is called the "Full Court," sitting *in Banco*, which is

The Full Court.

generally composed of at least three of the Judges. The Chief Justice, or in his absence the senior puisne Judge, presides over the Full Court, which gives its decision by majority. The circumstances under which new trials are granted are:—Where the Judge has erroneously admitted or rejected material evidence; where he has wrongly directed the jury on a point of law; where the verdict of the jury is clearly against evidence; or where, from some other cause, there has evidently been a miscarriage of justice.

Appeal to Privy Council permitted.

Provision is made for appeals to the Privy Council, but any suitor wishing to carry his cause before the supreme tribunal of the Empire must first obtain leave so to do from the Supreme Court. The amount in dispute must be at least £500, or affect the construction of a New South Wales statute. In other cases application for leave to appeal must be made to the Privy Council itself.

Vice-Admiralty Court.

The Chief Justice has also an extensive jurisdiction as Commissary of the Vice-Admiralty Court, in which all cases arising out of collisions, &c., in Australian waters, are determined.

Equity jurisdiction.

One of the puisne Judges also acts as judge of the Equity Court, from whose decrees an appeal lies to the Full Court, and thence to the Privy Council.

Divorce Court.

Another puisne Judge presides over the Divorce Court, in which cases are usually tried without a jury, an appeal lying to the Supreme Court.

Ecclesiastical jurisdiction.

The equity Judge also represents the ecclesiastical jurisdiction of the Supreme Court, and hears and decides all applications for the probate of wills, and for letters of administration, and also determines suits as to the validity, &c., of wills. Motions for rehearing cases, adjudicated in this court, are sometimes made before the Supreme Court or Privy Council. Barristers only have the right of audience before the Supreme Court.

Civil suits.

The following table gives the number of civil suits decided in the Supreme and Circuit Courts in each year from 1876 to 1888, inclusive :—

Civil Suits.

Year.	No. of writs issued.	No. of causes entered for trial.	Defended.	Undefended or settled.	Total amount for which judgment signed.
					£
1876	2,530	293	208	85	106,257
1877	2,887	286	188	98	127,205
1878	3,280	319	199	120	278,126
1879	3,806	292	179	113	436,356
1880	3,312	350	202	148	202,254
1881	2,845	331	173	158	....
1882	3,161	414	250	164	169,520
1883	3,830	377	225	152	....
1884	4,547	493	271	222	370,648
1885	4,079	494	255	239	399,952
1886	5,649	503	255	248	410,275
1887	5,149	478	223	255	457,704
1888	4,636	583	306	277	393,976

Probates and letters of administration.

The number of probates and letters of administration in connection with wills for each year, of the same period, is given below.

Probates and Administrations.

Year.	No. of probates and administrations—Wills annexed.	Amount sworn to.	No. of letters of administration.	Amount sworn to.	Total.
		£		£	£
1876	511	1,677,972	415	223,189	1,901,161
1877	530	1,336,599	471	291,391	1,627,990
1878	573	1,735,064	514	281,367	2,016,431
1879	579	2,116,906	472	269,991	2,386,897
1880	667	1,323,823	506	210,816	1,534,639
1881	671	2,011,305	526	307,818	2,319,123
1882	810	3,586,554	589	581,528	4,168,082
1883	862	3,528,602	613	588,029	4,116,631
1884	933	3,642,709	648	605,543	4,248,252
1885	961	3,721,805	659	601,542	4,323,347
1886	1,026	4,726,918	706	768,628	5,495,546
1887	961	3,621,874	665	641,426	4,263,300
1888	998	3,652,963	667	638,295	4,291,258

CRIMINAL JURISDICTION.

Trial by jury.

A Judge of the Supreme Court presides over the Central Criminal Court of Gaol Delivery held at Darlinghurst. All prisoners are tried by a jury of twelve, chosen by ballot from the panel provided by the Sheriff. Every person charged with felony has a peremptory right of challenge extending to twenty jurors, and he can also further exercise his right of challenge on cause shown and allowed. No prisoner is permitted to give evidence, but he has a right to the services of counsel in conducting his defence. The verdict of the jury must be unanimous, for even if eleven jurors were agreed their verdict could not be accepted. If the jury cannot agree they may be locked up until they either give a unanimous verdict, or are discharged by the Court. If no verdict is returned the prisoner is liable to be tried over again by another jury.

Gaol deliveries.

In addition to the supreme, civil, and criminal sittings of the Court held in Sydney, each Judge goes on circuit once in each half-year, and holds Courts of Gaol Delivery and for hearing civil cases at certain circuit towns, viz. :—In the north—Maitland, Tamworth, Armidale, and Grafton; in the west—Mudgee, Bathurst, and Dubbo; in the south—Goulburn, Yass, Wagga Wagga, Albury, and Deniliquin.

DISTRICT COURTS.

Minor civil causes.

District Courts have been established for the trial of civil causes where the value in dispute does not exceed £200. They are presided over by Judges specially appointed for the purpose, who also perform the duties of Chairmen of Quarter Sessions for the trial of all prisoners except such as are charged with capital crimes. District Courts sit ten months during the year in the metropolis, and are held twice a year in all considerable country towns. The Judge is not ordinarily assisted by a jury, but in cases where the amount in dispute exceeds £20, either of the parties may, by giving notice to the Registrar of the Court, have a jury summoned. On questions of law an appeal lies to the Supreme Court.

Questions reserved for Supreme Court

On the trial of prisoners at Quarter Sessions, the Chairman, at the request of the prisoner's counsel, must reserve questions of law for the consideration of the Supreme Court, or he may so act *motu proprio.*

Suits in District Courts.

The number of suits in the District Courts of the Colony, and the mode in which they were tried, whether with or without jury, &c., is given in the following table for the judicial year terminating the last day of February, 1889 :—

Suits in District Courts, 1888–89.

District.	Number of suits.		Settled.		Number of cases tried.		Result of the trials.	
	Commenced.	Total amount sued for.	Without hearing.	By arbitration.	By jury.	Without jury.	For plaintiffs.	For defendants.
Metropolitan and Hunter..	6,084	144,894	2,646	...	14	3,123	2,896	241
Southern	934	31,080	339	3	33	528	461	100
South-western.	970	36,197	452	...	19	466	445	40
Western	745	21,307	314	2	8	393	361	40
Northern	1,441	39,438	565	2	7	834	697	144
North-western.	396	17,539	204	...	7	135	123	19
Total	10,570	290,455	4,520	7	88	5,479	4,983	584

The costs of the above-mentioned suits in the Districts Courts amounted to £21,560.

INSOLVENCY COURT.

Insolvent debtors.

The statutes relating to insolvent debtors are administered by the Supreme Court, and the jurisdiction is exercised by a Judge thereof, called the Judge in Bankruptcy, who may on occasion delegate certain of the powers vested in him to the Registrar of Insolvent Estates. When any person becomes embarrassed, and is unable to pay his debts, the law allows him to sequestrate his estate for the benefit of his creditors, or these latter may, under certain specified circumstances, apply for a compulsory sequestration. An officer of the Court, termed an official assignee, is appointed by the Judge to manage each sequestrated estate. His duties are to realise the insolvent's assets, and pay *pro rata* the debts proved, subject to the approval of the Judge. After each insolvent's case has been investigated, and all dividends have been paid, the Judge may at his discretion grant a certificate relieving the insolvent from all future liability. This certificate is granted in all cases where no blame has been found to attach to the applicant; but where the insolvency has been brought about by recklessness or fraud, it is often withheld for some time, and, in very bad cases, refused entirely. An appeal from the decision of the Judge may be made on the same terms and in similar mode as is provided in respect to an order, decision, or ruling of a Judge of the Supreme Court, and by the rules of Court, though the Judge from whose decision an appeal has been made may not sit to hear such appeal.

Sequestration of estates.

The number of insolvents, and the amounts for which they failed, and other particulars will be found in the chapter of this volume relating to finance.

PART XVII.

Constitution and Government.

THE record of New South Wales as a Crown Colony belongs more to history than to current statistics. It is therefore not proposed, in the following sketch, to deal with matters prior to the establishment of Responsible Government, though a brief narrative of the early history and settlement of the country will be found in the opening pages of this volume.

Present mode of government began in 1855.

The present form of government was inaugurated little more than thirty years ago, the "Act to confer a Constitution on New South Wales, and to grant a Civil List to Her Majesty," having received the Royal assent on the 16th July, 1855. This important statute was proclaimed in Sydney on the 24th of November of the same year, and at once came into operation, sweeping away entirely the former system, and constituting an elective representative Chamber, thus making the colonists of New South Wales, by the granting of equal privileges, the equals of their countrymen in other parts of the Empire. The ties which bound the Colony to the Empire were in no way loosened, for the Constitution Act simply conceded to the people of New South Wales the same rights which prevailed in the United Kingdom, namely, of taxing themselves, and of being governed by Ministers responsible to a Parliament elected by the people. The authority vested in the Sovereign remains the same as before, though the mode of its exercise is widely different. The Sovereign, previously to Responsible Government, exercised, through the Governor, almost despotic power. This official, in times past, united in himself the executive and legislative functions, and personal liberty and independence

The Sovereign.

were to no small degree in his power. With the establishment of Responsible Government, this state of things ceased, and the greatest measure of individual liberty is now found compatible with the full protection of public rights. The readiness with which the people of the Colony adapted themselves to the forms and practice of their new government was not a little remarkable, and fully justified their assumption of its privileges.

Laws enacted in Queen's name.

All laws are still enacted in the name of the Queen, "by and with the advice of the Legislative Council and Legislative Assembly," the Governor, as the Royal Deputy, giving the assent of the Sovereign immediately to Acts of Parliament, or reserving them for the consideration of the Sovereign, if he thinks fit. To afford a clearer conspectus of the Constitution, it will be well to consider, under distinct heads, the several elements which form the governing and legislative body.

THE GOVERNOR.

How appointed.

Previously to the year 1879 the Governor of the Colony was appointed by Letters Patent under the Great Seal; but in that year the practice was discontinued by the advice of Sir Alfred Stephen, given during the tenure of office of Sir Hercules Robinson. The change was first carried out in the appointment of Lord Augustus Loftus. The office of Governor is now constituted by permanent Letters Patent, and by a standing Commission, instead of as formerly by letters issued *pro hac vice* only. The Governor receives his appointment at present by Commission under the Royal sign manual and signet, which recites the Letters Patent of the 29th April, 1879, as well as the instructions issued (under sign manual and signet) in further declaration of the Queen's "will and pleasure." The original Letters Patent, thus recited and enforced, declare that the Governor is directed and empowered "to do and execute all things that belong to his office according to the tenor of the Letters Patent, and of such Commission as may be issued to

Lieutenant-Governor.

him under our sign manual and signet, and according to such instructions as may from time to time be given to him under our sign manual and signet, or by our order in our Privy Council, or by us through one of our Principal Secretaries of State, and to such laws as are now or shall hereafter be in force in the Colony." By a custom which has now long prevailed no Governor is allowed to retain his office longer than six years. Should the Governor die or become incapable during his tenure of office, or be removed before the arrival of his successor, or should he have occasion to leave the Colony for any considerable period, the Government is to be administered (1) by the Lieutenant-Governor, or, if there be no Lieutenant-Governor, (2) by an Administrator to be appointed according to the provisions of the Letters Patent and instructions. The present Lieutenant-Governor is Sir Alfred Stephen, who was appointed by a Commission, dated 30th April, 1879; and the Administrator was appointed by a Commission of the same date, directed to the President of the Legislative Council for the time-being.

The Administrator.

The Lieutenant-Governor, or, in his absence, the Administrator, is empowered by his Commission to execute the office of Governor during any temporary absence of the Governor from the Colony; but the Governor may not be absent, except in accordance with the terms of his instructions. He may not leave the Colony without the Queen's special leave, unless on a visit to the Governor of a neighbouring colony, for a period exceeding one month at a time, nor exceeding in the aggregate one month for every year of his service; but, on the other hand, the Governor may leave the Colony for any period not exceeding one month without its being reckoned as a departure, if he shall have previously informed the Executive Council in writing of his intention, and appointed a deputy to act for him till his return. This deputy must, in the first instance, be the Lieutenant-Governor; but if, from any cause, his services are not available, the Governor may appoint whom he pleases as his deputy.

The Governor's functions, according to the Letters Patent, Commission, and Instructions may be recapitulated as follows:—

The Governor is the custodian of the Great Seal, under which all Crown grants, &c., must pass.

Governor appoints Executive

The Governor has the appointment of his own Council—the Executive. He is also to summon that Council, and is, ordinarily its President; but in his absence some other member may be nominated to preside. It is usual, however, to appoint some member of the Ministry permanent Vice-President, who presides in the absence of the Governor.

The Governor is the fountain of honour within the Colony, since to him belongs the power to appoint, in the Queen's name, all Judges, Justices of the Peace, Commissioners, and other "necessary officers and Ministers"; and he may remove, by virtue of his powers as Viceroy, from the exercise of his office any official so appointed.

Prerogative of mercy.

The Governor is also the depositary of the prerogative of mercy within the Colony, having it in his power to pardon, either absolutely or conditionally, any offender convicted in New South Wales. He can also remit fines, penalties, and forfeitures due to the Crown, but he cannot pardon or remit on the condition of the offender voluntarily leaving the Colony, unless the offence has been a political one only. In all capital cases the Governor is required by his instructions to obtain a report in writing from the Judge who tried the prisoner, which is to be considered at a meeting of the Executive Council, and the Judge himself may also be examined before the Council, although his recommendations need not necessarily be adopted. The Governor, however, is not empowered to reprieve any capitally sentenced prisoner, or pardon him absolutely "unless it shall appear to him expedient so to do upon receiving the advice of the Executive Council, but in all such cases he is to decide either to extend or to withhold the pardon or reprieve according to his own deliberate judgment, whether the members of the Executive Council concur therein or otherwise." If the Governor decides to act contrary to the advice of the Executive he must make a minute in the proceedings, stating his reasons for so acting, *in extenso.*

The Governor is also vested with the authority of the Crown, enabling him to nominate the members of the Upper House of the Legislature, and to summon, prorogue to a future day, or dissolve "any legislative body" existing in the Colony.

Governor acts by advice of Executive.

His instructions, however, provide that in the exercise of the above powers the Governor is to act by the advice of the Executive Council in all cases, except those whose nature is such that in his opinion the public service "would sustain material prejudice," or in matters too trivial to submit to the Council, or "too urgent to admit of their advice being given;" but in all such urgent cases he must communicate to the Council as soon as practicable the measures taken by him, and his reasons for acting. It is expressly provided, however, that the Governor may, if he think fit, disregard the advice of the Executive and act in direct opposition to the declared will of his advisers, but in such cases he is required to make a full report of the whole circumstances for the information of the Secretary of State for the Colonies.

Governor Viceroy as regards Royal assent.

The Governor acts as Viceroy as regards giving the Royal assent or vetoing Acts passed by the Legislature, or reserving Bills for the special consideration of the Sovereign. The instructions deal at large with this matter, but it is usual in practice to be guided to a large extent by the advice of the law officers of the Crown. There are eight different classes of Bills, however, to which the Governor is bound to refuse the Royal assent. They are:—

(1.) Divorce Bills (that is, private bills divorcing particular persons).

(2.) Bills making any kind of grant, gratuity, or donation to the Governor.

(3.) Bills affecting the currency.

(4.) Bills imposing differential duties, which are not in accordance with the "Australian Colonies Duties Act, 1873."

(5.) Bills apparently contrary to Imperial treaty obligations.

(6.) Bills interfering with the discipline or control of Her Majesty's land or sea forces employed in the Colony.

(7.) Bills of great importance, or extraordinary in their nature, whereby the Royal prerogative, or the rights and property of Her Majesty's subjects residing beyond the Colony, or the trade and shipping of the United Kingdom and its dependencies may be prejudiced.

(8.) Bills containing provisions to which the Royal assent has already been refused, or which have been once disallowed, unless they contain a clause suspending their operation until the Queen's pleasure has been signified, or unless the Governor is satisfied that there is urgent necessity for bringing any such Bill into immediate operation, in which case he is empowered to assent to the Bill on behalf of the Queen, if it is not repugnant to the law of England, or inconsistent with Imperial treaty obligations; and in every such case he is required to transmit the Bill to Her Majesty, together with his reasons for assenting to it.

Acts regulating Royal assent.

The following Acts of Parliament regulate the action of the overnor in assenting to Bills on behalf of the Queen, or reserving em for the consideration of the Sovereign:—5 and 6 Vic., secs. 1–32, cap. 76; 7 and 8 Vic., sec. 7, cap. 74; and 13 and 14 Vic., p. 59, secs. 13, 32, and 33. The effect of these enactments is to prive any reserved Bill of all force and legality until the Queen's ent thereto has been formally communicated to the Governor; d power is given to Her Majesty to veto any Bill to which the overnor has assented on her behalf within two years after the ceipt of such Bill by the Secretary of State for the Colonies, in hich case the Bill is to be declared null and void by message of the Governor, and proclamation. Reserved Bills are to be laid before Her Majesty in Council, and the Queen may allow them or not within a period of two years from the day on which they were reserved by the Governor. The Queen's assent to reserved Bills may be transmitted by telegram.

Summoning of Parliament, &c.

By the Act 7 Vic., No. 16, all Acts of Parliament which become law are required to be registered by the Registrar-General within ten days of their so becoming law.

The above is a summary of the powers and duties of the Governor, as defined by his instructions and the Letters Patent, but additional duties have been imposed upon him by the Constitution and Electoral Act. In accordance with these enactments he must summon the Legislative Assembly, appoint the President of the Legislative Council; prorogue or dissolve Parliament; appoint his ministers *proprio motu;* also appoint, with the advice of the Executive, all public officers whose appointment is not vested in heads of departments; issue all warrants for the payment of money; issue the writs for general elections, and, in the absence of the Speaker, issue writs to fill vacancies occurring in the Assembly. He also appoints all returning-officers, and issues the writs for additional members provided for by the expansive clauses of the Electoral Act.

Dissolution of Parliament.

In summoning, proroguing, or dissolving Parliament, the Governor usually acts according to the advice tendered him by the Cabinet, but he is in no way bound to do so; and, as a matter of fact, has sometimes declined to be guided by his Ministers. This, however, has never happened except in respect to granting a dissolution. As to summoning or proroguing a difference of opinion is hardly likely to arise. The relations established between the Ministry and the representatives of the people are in accordance with the time-honoured precedents prevailing in Great Britain, which may be thus defined. The Cabinet must be chosen from—"(1) Members of the Legislature; (2) Holding the same political views, and chosen from the party possessing a majority in the ouse of Commons; (3) Carrying out a concerted policy; (4) nder a common responsibility, to be signified by a collective signation in the event of Parliamentary censure; and (5) acknowledging a common subordination to one Chief Minister."

Circumstances under which a Government must resign.

The Imperial rule as to the circumstances under which a overnment is bound to resign, is as follows:—Censure, involving oss of office, rests entirely with the Lower House, or popular ranch of the Legislature. Hence directly a Ministry fails to ommand a majority of the House of Commons it must give place o another. Want of confidence in a Cabinet may be shown in three ways: first, by a direct vote of censure, or a specific declaration of want of confidence; secondly, by a vote disapproving of some act of the Government; or thirdly, by the rejection of some important measure introduced by the Ministry. In any of these cases Ministers must either resign or appeal to the country, if they can get the Sovereign to sanction a new election.

These rules have been virtually adopted in New South Wales and the undoubted right of the Governor, as the depositary of the Royal prerogative, to refuse to grant a dissolution, if he thinks fit, has been more than once exercised. In March, 1877, Sir Hercules Robinson refused to grant a dissolution to Sir John Robertson, and in September of the same year he also refused to enable Sir Henry Parkes to go to the country. The reason alleged in each case was that the Assembly refused to make provision for the expenditure of the year. It will thus be seen that a grave responsibility is thrown upon the Governor in the exercise of the undoubted right of granting or refusing a dissolution of Parliament, and in the cases mentioned it can hardly be doubted that Sir Hercules Robinson acted within his powers. The Viceroy is the conservator of the rights and interests of the whole population, and it must be evident that grave evils would ensue should a dissolution take place before supplies had been granted.

Prerogative of mercy.

The exercise of the prerogative of mercy is such an important function of the Governor, and he is so liable on some occasions to have strong pressure brought to bear upon him in connection with it, that it will be well to quote at length a despatch of Lord Carnarvon, explaining the instructions on this point. Under date 4th May, 1875, he wrote :—

> "It should be understood that no capital sentence may be either carried out, commuted, or remitted, without a consideration of the case by the Governor and his Ministers assembled in Executive Council. A minor sentence may be commuted or remitted by the Governor, after he has duly considered the advice, either of his Ministers collectively in Executive Council, or of the Ministers more immediately responsible for matters connected with the administration of justice; and whether such advice is or is not tendered in Executive Council, it would seem desirable that, whether also given orally or not, it should be given in writing."

Governor as Commander-in-Chief of military forces.

One exception to the rule that every exercise by the Governor of the Royal prerogative is subject, practically, to the control of the Legislature, occurs in connection with the exercise of his office as Commander-in-Chief of the land and sea forces. The Governor's powers in this regard are defined and regulated by the Military and Naval Forces Regulation Act of 1871, which, after providing for the raising and maintenance of a standing force, goes on to vest the supreme command in the "Governor," which title, in the interpretation clause, is defined to mean "the Governor with the advice of the Executive Council," *unless the context shall otherwise indicate.* Full powers with relation to the Volunteer Force are also bestowed on the Governor by the Volunteer Regulation Act of 1867, but in this, as in the former statute, "Governor" only means "the Governor with the advice of the Executive Council," *if this meaning is not inconsistent with the context or subject-matter.* It will at once be seen that these are both important limitations, as in certain imaginable contingencies the Governor is left free to act on his own responsibility. This places the Governor almost in the position of the Commander-in Chief in England (when such an officer exists, which is very seldom, the control of the army usually being vested in Generals commanding-in-chief); that is, he has at times the absolute disposal of the armed force of the Colony. This power is peculiar to New South Wales, as in other British Colonies, the Governor possesses no more power over the military than he does over any civil department of the service. The position of the Governor as Captain-General does not, however, give him power to take the direct command of Imperial troops, should any such be stationed in the Colony.

Martial Law.

As regards the far more important power of the Governor to proclaim martial law, different opinions are held. But there is no doubt, as the power has not been conferred by any statute in force in the Colony, that, if it exists, it must be a matter of prerogative. The necessity for proclaimimg martial law has happily never occurred since the advent of Responsible Government.

THE EXECUTIVE.

The Cabinet.

The Executive Council is composed of the ten Ministers, namely: The Colonial Secretary, the Treasurer, the Attorney-General, the Secretary for Lands, the Secretary for Public Works, the Minister of Justice, the Minister of Public Instruction, the Secretary for Mines, and the Postmaster-General, with sometimes a Vice-President of the Executive Council, who is without a portfolio. These form the Cabinet, and, of course, are responsible to Parliament. The Ministry, as the advisers of the Governor, must also retain his confidence, but practically, this is seldom likely to be withdrawn, so long as they can command a working majority in the Assembly. The Governor may dissolve Parliament although the Ministry have not sustained a defeat, and in this case the continued existence of any Government would depend directly on the vote of the constituencies, but such a contingency can happen but seldom.

Ministers not usually appointed from Upper House.

It is rare for more than one Minister to be selected from the Upper House, and it will thus be seen that the principle of the responsibility of members of the Government to Parliament is

Ministers responsible to Parliament.

fully carried out. For every act of the Governor as Viceroy, some Minister is responsible to Parliament; and even in matters of Imperial interest, where the final onus rests upon the Governor, he himself is responsible to the Imperial Government, whose members are under the control of the House of Commons, so that no loophole is left for the exercise of any arbitrary act. The Crown, except in two instances (appeals to the Privy Council and the bestowal of titles), acts towards the Executive through its representative, the Governor; and so long ago as the inception of Responsible Government, Earl Grey declared, in an official despatch, that he should make "a judicious use of the influence, rather than of the authority, of his office," which wise maxim has usually been followed. But in extreme cases, such as when his sanction is requested to any illegal proceeding, the Governor is bound, without question, to keep the law, though he may thereby be brought into hostile relations with the Cabinet. Sir Michael Hicks-Beach, in a communication to the Governor-General of Canada in 1879, clearly laid down the doctrine that the Governor of any British Colony "has an unquestionable constitutional right to dismiss his Ministers, if from any cause he feels it incumbent on him to do so." This does not militate against the doctrine of responsibility, for if the Ministry appointed by the Governor do not possess the confidence of Parliament, they cannot hold office, and hence the Governor will be forced to give way, or else persevere till he can select a Ministry which the Assembly will accept. The final control will thus be, as in every other case, with the representatives of the people. In matters of routine, the Governor will necessarily act on the advice of his Ministers, and in most cases relating to the internal economy of the departments, he will adopt even the individual recommendations of the Ministers by whom they are severally controlled.

Dismissal of Ministers.

As regards matters of purely Imperial interest, the Governor is responsible to the British authorities for their due conservation. If, in consequence of his action on any such matter, he is involved a dispute with his Ministers, he is bound to refer them to the vereign, should his action have been endorsed by the Colonial ffice. If his conduct is not approved of in England he would most kely be recalled. It follows from this, that in no case can the overnor be held to be responsible directly to Parliament for s conduct. His Ministers are responsible, but personally he has ly to render an account to the Crown itself, that is, to the nperial Parliament.

Executive mus be summoned by Governor.

The Executive Council cannot discharge any function unless ly summoned by the Governor, and at least two members, sides the Governor or presiding member, are present to form a orum. Formal minutes are, of course, kept of all proceedings. he Executive Council, as at present constituted, is as follows :—

Premier and Colonial Secretary.	The Hon. Sir Henry Parkes, G.C.M.G.
Colonial Treasurer	The Hon. William McMillan.
Attorney-General	The Hon. George Bowen Simpson, Q.C.
Secretary for Lands	The Hon. James Nixon Brunker.
Secretary for Public Works......	The Hon. Bruce Smith.
Minister of Public Instruction	The Hon. Joseph Hector Carruthers.
Minister of Justice	The Hon. Albert John Gould.
Postmaster-General	The Hon. Daniel O'Connor.
Secretary for Mines	The Hon. Sydney Smith.
Vice-President of the Executive Council and Representative of the Government in the Legislative Council (without portfolio)	The Hon. William Henry Suttor.

Since the introduction of Responsible Government there have en twenty-six Ministries, the average tenure of office being e year and three months.

THE PARLIAMENT.

Relative powers of the two Houses undefined.

It seems a singular omission in the Constitution Act that no finition is given of the relative powers of the Legislative Council d Legislative Assembly. Such is the fact, but no inconvenience s arisen thereby, since by common consent it has been agreed at the precedents regulating the proceedings and relations, *inter* se, of the two Houses of the Imperial Parliament shall be followed, as far as applicable, in New South Wales. The Constitution Act provides that all money bills shall be introduced in the Lower House only. The important rule of the House of Commons, affirmed two hundred years ago and constantly enforced ever since, that "all aids and supplies, and aids to Her Majesty in Parliament are the sole gift of the Commons, and it is the undoubted right of the Commons to direct, limit, and appoint in such bills, the ends, purposes, considerations, conditions, limitations, and qualifications of such grants, which ought not to be changed or altered by the House of Lords," is also held to be in force as regards the Parliament of this Colony, and has always been recognized and acted upon.

Parliament cannot punish for contempt.

The two Houses, however, do not possess the most important of the privileges of the Imperial Parliament, namely, the right of punishing for contempt, although the Legislative Assembly has, on one occasion, punished one of its members, for conduct assumed to be dishonorable beyond its precincts, by expelling him. As regards disorderly conduct within the walls of the Chamber it has been held by the Supreme Court and affirmed by the Privy Council, that the Assembly only possesses the power of suspending a member for disorderly conduct for the period of the sitting at which such conduct took place. A member may be also removed from the House by order of the Speaker if he persists in obstruction or contemns the Standing Orders; but fortunately this course has seldom been rendered necessary.

Witnesses may be summoned.

Witnesses may be summoned to give evidence before either House, or before committees of the Council or Assembly, the necessary powers for compelling their attendance having been conferred by an Act passed in 1881. Any person disobeying a summons may be arrested on a Judge's warrant, and the maximum penalty for refusing to give evidence is imprisonment for one calendar month.

As regards the maximum number of members of the Legislative Council no limit is assigned by the Constitution Act, although

No limit to numbers of Council.

the minimum number is fixed at twenty-one. It will be seen that this gives power to a Governor to quash any possible obstruction on the part of the Council to the will of the Government, and the Lower House by "swamping" the Council. Such a proceeding, however, can hardly be held to be allowable, except under extreme circumstances. As a matter of fact, an attempt to "swamp" the Council was made during one of the premierships of the late Sir Charles Cowper, but public opinion condemned the course most strongly, although the somewhat peculiar circumstances of the case were thought at the time to justify the Governor's action. The authorities in England severely rebuked the Governor (Sir John Young) for the course he had taken, and since then, "swamping' the Council has never been seriously entertained, nor is there much chance that it will ever again be attempted. The principle in fact has been affirmed, on the basis of an understanding entered into between Sir John Young and the leading statesmen of the day (of both sides of the House), that the members of the Legislative Council should be limited to a convenient number, and that no nominations should ever be made merely for the purpose of strengthening the party which happens to be in power. A deadlock between the two Houses is provided against by the universal feeling that the Assembly represents the will of the people, and in such case the Council would certainly have to give way to the deliberate will of the people's representatives. The Council is intended as a check to hasty legislation; and it doubtless acts as a useful "brake" to violent party feeling.

THE LEGISLATIVE COUNCIL.

Constitution of the Legislative Council.

As before stated, the members of the Upper House are nominated by the Governor, the minimum number composing the House being fixed at twenty-one. No limit as to numbers is fixed by the Constitution Act, but in accordance with the arrangement already described the number is practically kept down by the exclusion of all purely political appointments. As the number of members of the Assembly has been greatly increased in pursuance of the "expansion" clauses of the Act, the present number of members composing the Council (sixty-four) will not be considered an unfair proportion, as the increase is in about the same ratio as that of the Assembly. The members must be of full age, and either natural-born or duly naturalized subjects of the empire. Four-fifths of the members must be persons not holding any paid office under the Crown, but this is not held to include officers "in Her Majesty's sea and land forces on full or half pay, or retired officers on pensions." Though the appointment is for life, a member may resign his seat, and he also forfeits it by absence from two consecutive sessions without leave, by becoming naturalized in a foreign State, by becoming insolvent, by becoming a public contractor, or defaulter, by being attainted of treason, or being convicted of felony, or any infamous crime. The Governor appoints and removes, if considered necessary, the President, who may speak in debate, but can only give a casting vote. An attendance of one-third of the members on the roll is necessary to constitute a quorum. The Council must hold a sitting at least once in every year, and no greater interval than twelve months must elapse between session and session. The proceedings are regulated by standing orders, which are, in the main, similar to those of the Assembly, the latter being framed on the model of the rules obtaining in the House of Commons. No member may sit or vote till he has taken the oath of allegiance, or the affirmation prescribed in lieu of that oath.

Members may resign.

THE LEGISLATIVE ASSEMBLY.

The Lower House of Parliament is elected by manhood suffrage, the number of electorates being at present seventy-four, returning 137 members. The qualification of electors is derived either from actual residence in an electorate or ownership of a freehold or leasehold therein. The following are the rules applying to each of the two cases:—

Qualification of electors.

1. Any person claiming a right to have his name on the electoral roll in respect of residence must prove that at the time of the

collection of the roll he resided in the electorate in question, and had done so for six months previously.

Property qualification.

2. Any person who claims in respect of property must show that at the time the electoral list was made up, and during the preceding six months:—

(a.) He is and has been holder of a freehold or leasehold estate of the clear value of £100, or

(b.) He is and has been in the receipt of rents and profits of the annual value of £10, arising from freehold or leasehold property, or

(c.) Occupies and has occupied a house, warehouse, office, shop, room, or building, either with or without land attached, of the annual value of £10, or

(d.) Holds and has held a Crown lease or license for pastoral purposes within the electoral district.

The six months occupation is not required to be of the same premises, provided he has occupied continuously several sets of premises of the required value he is entitled to vote.

A man must be possessed of one or other of the above qualifications to entitle him to vote in any electorate; but he can only have one vote in each electorate, no matter how many qualifications he has in that electorate. If he is qualified in several electorates he is entitled to have his name on the electoral roll in each.

Disabilities.

A person is disabled from voting by reason of the existence of any of the following disqualifications at the time of making out the electoral roll:—

1. Being of unsound mind.
2. Being in receipt of eleemosynary aid.
3. Having been convicted of treason, felony, or other infamous crime, unless he has either received a free or conditional pardon, or has served his sentence.
4. Being in the military or naval service on full pay. Membership in a volunteer or militia corps does not disqualify.

returns three has reached 8,000, such electorate, in e
entitled to return an additional member ; but the Gov
first notify the fact by proclamation in the *Gazette.*

Any natural born or duly naturalized subject of He
is capable of being elected a member of the Assembl
to the same disqualifications as for voters, with the
additional ones:—

1. He must not be a member of the Legislative Co
2. He must not hold any office of profit under t
   either for a term of years or during pleasure.
3. He must not be in any way interested in any co
   the public service.

Offices of profit.

By the "Constitution Act Amendment Act of
disqualification of persons holding office of profit wa
not to apply to the Colonial Secretary or other mem
Ministry. The third disqualification also does not ap
contract made by a company consisting of more th
persons. If any disqualified person should be elected t
is voided by the House, and should such person presum
vote he is liable to a fine of £500.

Payment of Members.

By an Act, assented to on the 21st September, 1889,
of the Assembly are allowed the sum of £300 per

ave vacated it under any of the following conditions :—Absence uring a whole session without leave, naturalization in a foreign ountry, insolvency, being a defaulter, or convicted of treason, elony, or any other infamous crime.

Parliament triennial.

The Act 37 Vic., No. 7, provides that no Assembly can prolong ts existence beyond the term of three years. One session, at east, must be held every year, and twelve months must not lapse between any two sessions. On first meeting after a general lection, the first business is to elect a Speaker, who has only a asting vote. Twenty of the members (exclusive of the Speaker) onstitute a quorum.

Writs.

Writs for general elections must be made returnable not later han thirty-five clear days after the date of the proclamation issolving the former Parliament. Writs for general elections, and also for vacancies occurring between a general election and the meeting of Parliament for the despatch of business, are issued by the Governor. For all other elections the writs are issued by the Speaker, unless absent from the Colony, or unless no Speaker has yet been elected, when the Governor signs these writs in like manner to the others.

Election is by ballot.

Election is by ballot, the names of those entitled to vote being compiled once a year and published for general information.

Meeting of first Parliament.

The first Parliament elected under the Constitution Act met on the 22nd May, 1856, just six months after the proclamation of the Constitution. Its duration, unless Parliament should be previously prorogued, was originally fixed at five years, but in 1874 an Act was passed establishing triennial Parliaments, which has ever since remained law. Since the inauguration of Responsible Government there have been fourteen appeals to the people, so that it will be seen the duration of each Assembly has not averaged even the shorter period of life to which its existence is now limited. The subjoined table gives the duration of each Parliament elected under Constitutional Government.

Duration of Parliaments since the Establishment of Responsible Government.

Parliament.	Opened.	Dissolved.	Duration.			No. of Sessions.
			Yr.	mth.	dy.	
First	22 May, 1856 ...	19 Dec., 1857 ...	1	6	27	2
Second	23 March, 1858 ...	11 April, 1859 ...	1	0	19	2
Third	30 Aug., 1859 ..	10 Nov., 1860 ...	1	2	11	2
Fourth	10 Jan., 1861 ...	10 Nov., 1864 ...	3	10	0	5
Fifth	26 Jan., 1865 ...	15 Nov., 1869 ...	4	9	22	6
Sixth	27 Jan., 1870 ...	3 Feb., 1872 ...	2	0	7	3
Seventh......	30 April, 1872 ...	28 Nov., 1874 ...	2	6	29	4
Eighth	27 Jan., 1875 ...	12 Oct., 1877 ...	2	8	15	3
Ninth	27 Nov., 1877 ...	9 Nov., 1880 ..	2	11	13	3
Tenth	15 Dec., 1880 ...	23 Nov., 1882 ...	1	11	8	3
Eleventh	3 Jan., 1883 ...	7 Oct., 1885 ...	2	9	4	6
Twelfth	17 Nov., 1885 ...	26 Jan., 1887 ...	1	2	9	2
Thirteenth ..	8 March, 1887 ...	19 Jan., 1889 ...	1	10	11	3
Fourteenth..	22 Feb., 1889 ...	....	....			...
		Average	2	2	4	3 to 4

Interest displayed in elections.

The amount of interest displayed by the electors in the exercise of their franchise is very considerable, though the proportion of votes recorded may not appear to sustain this view. At the general election of 1889 the total number of votes on the electoral rolls was 280,106, or 10 voters to every 39 persons in the community. In ten electorates, with 22,397 electors, returning thirteen members, there were no contests. The remaining 64 electorates, returning 120 members, comprised 257,709 electors, and of these only 154,924, or 60·11 per cent., recorded their votes.

Large area of electorates.

to the vast extent of some of the electoral districts many an only record their votes at considerable inconvenience elves, and to this cause, combined with the fact that the f non-resident voters is very considerable, must be assigned ently low percentage of votes recorded. The number of oting as compared with the number of electors on the hese electorates in which there were contests has been 5 as follows:—

eneral Elections.	*No. of Electors on Rolls.	†No. of Persons who voted.	Percentage of Voters to total No. on Rolls.
....	104,575	57,651	55·13
....	120,698	62,172	51·51
....	140,848	90,657	64·36
....	166,260	96,842	58·26
....	203,669	124,378	61·07
....	226,228	131,062	57·93
....	257,763	154,924	60·10

oes not include the number on the rolls in uncontested electorates.
ncludes informal votes.

Proportion of population eligible to vote

nber of males of full age, compared with the total popu- ery large, the proportion at the last census being 28·18 The number of persons entitled to vote under the system al suffrage which prevails amounts to an average of 26·06 f the total population. The average number of electors er at the time of the last general election was 2,044, and ted population to each member was 7,925. The sub- le gives the result of all the general elections which n place under Representative Government.

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Informal Votes.
[illegible] 1853	First	[illegible]	[illegible]	*	*	*	*	*
[illegible]	Second	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	*
[illegible] August [illegible]	Third	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] January [illegible]	Fourth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] " [illegible]	Fifth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] " [illegible]	Sixth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] April [illegible]	Seventh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] January [illegible]	Eighth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] November [illegible]	Ninth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	*
[illegible] December [illegible]	Tenth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] January [illegible]	Eleventh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] November [illegible]	Twelfth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2,564
[illegible] January [illegible]	Thirteenth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] January [illegible]	Fourteenth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* Unrecorded.

PART XVIII.

Finance and Public Wealth.

IE Public Revenue of New South Wales largely exceeds that of any other Australian Colony. The total amount by each colony during 1888, as well as the revenue per itant, was as follows :—

Colony.	Total Revenue.	Revenue per head of population.
	£	£ s. d.
outh Wales	8,886,360	8 6 11
ia	7,607,598	7 3 0
sland	3,463,097	9 3 7
Australia	2,494,556	7 19 6
rn Australia	357,003	8 8 8
nia	640,068	4 8 8
ealand	4,109,815	6 15 9
evenue of Australasian Colonies	27,558,497	7 12 8

Revenue for 1825.

liable information respecting the revenue and expenditure of South Wales is not obtainable earlier than 1825, in which the public receipts amounted to £71,682, and the expendi- o £93,020. Sixty-three years afterwards, at the close of 1888, evenue had increased more than one hundred fold, though opulation had, during the same interval, increased only about fold. From 1825 to 1840, a date memorable in the annals of the Colony as that in which transportation ceased, the advan in the revenue was very rapid. In that year the public receipt amounted to £983,112, a sum not again reached until 1853, tw years after the discovery of gold. From 1853 to 1859 th revenue made great strides, and amounted to £1,522,668 for th year last mentioned. On the 1st December, 1859, the separati of Queensland took place, and there was consequently a falling of in the revenue of this Colony in the following year, the amou collected being £1,308,925. Since 1860 the income of the Colony has increased in a fairly regular manner, as may be seen from th following statement :—

teady increase
n revenue.

Revenue of New South Wales.

Year.	Amount.	Year.	Amount.
	£		£
1861	1,421,831	1875	4,126,303
1862	1,557,839	1876	5,037,661
1863	1,534,187	1877	5,751,878
1864	1,661,805	1578	4,991,919
1865	1,899,468	1879	4,481,665
1866	2,012,079	1880	4,911,990
1867	2,012,042	1881	6,714,327
1868	2,107,157	1882	7,418,536
1869	2,202,970	1883	6,470,341
1870	2,102,697	1884	7,117,592
1871	2,238,900	1885	7,587,368
1872	2,812,011	1886	7,594,300
1873	3,330,913	1887	8,582,811
1874	3,514,314	1888	8,886,360

lassification
f revenue.

The revenue is usually classified under four heads, Taxation Land Revenue, Services (including revenue from railways, tram

Total receipts.

ays, posts, telegraphs, and fees of various kinds), and Mis-llaneous. The total receipts under each class since 1871 were s follows :—

Classification of Revenue.

Year.	Taxation.	Land Revenue.	Services.	Miscellaneous.
	£	£	£	£
1871	1,063,204	497,978	561,679	116,039
1872	1,200,203	840,453	659,770	111,585
1873	1,364,806	1,137,914	728,875	99,318
1874	1,200,489	1,426,166	770,895	116,764
1875	1,122,002	2,020,629	858,497	125,175
1876	1,161,406	2,773,003	965,327	137,925
1877	1,233,132	3,236,277	1,119,532	162,937
1878	1,309,718	2,325,704	1,183,582	172,915
1879	1,272,721	1,632,024	1,328,302	248,618
1880	1,417,294	1,646,436	1,594,082	254,178
1881	1,770,849	2,820,988	1,945,076	177,414
1882	1,903,412	2,914,394	2,363,085	237,645
1883	1,891,708	1,656,069	2,666,731	255,833
1884	2,152,854	1,753,344	2,942,643	268,751
1885	2,252,651	1,876,452	3,168,463	289,802
1886	2,611,835	1,643,954	3,089,235	249,276
1887	2,664,548	2,378,995	3,245,907	293,361
1888	2,681,883	2,268,253	3,664,100	272,124

Refunds.

The amounts given above, as well as in the other tables referring to revenue and expenditure, represent the gross amounts. In every year there are considerable refunds made, so that the figures are somewhat too high. The amount of the refunds is now much less than formerly.

Taxation very light.

Though a revenue of £8,886,000 is derived from a populatio of little more than one million the people of New South Wal are very lightly taxed, the amount falling upon each person in t community for the last eighteen years averaging only £2 5s. 6 of which amount the bulk is obtained indirectly through t Customs House.

Taxation per Head.

Year.	Amount of taxation per head.	Year.	Amount of taxatio per head.
	£ s. d.		£ s. d.
1871	2 1 10	1881	2 6 7
1872	2 5 7	1882	2 7 11
1873	2 10 2	1883	2 5 4
1874	2 2 6	1884	2 8 10
1875	1 18 5	1885	2 8 4
1876	1 18 5	1886	2 13 4
1877	1 19 3	1887	2 12 2
1878	1 19 10	1888	2 10 5
1879	1 16 10	Average for 18 years	£2 5 6
1880	1 19 1		

Increased revenue per head.

The increase per head during the five years immediately following 1880 is due chiefly to the income derived from stamps. Th year 1886 showed an increase of 5s. per head over 1885, whi was due to the imposition of additional customs duties during th year. There was a slight decrease during 1887, arising from th repeal of the tariff of the previous year, which took effect on th 1st October, 1887, and a still further decline in 1888, due to th same cause.

Revenue from taxation.

s been estimated that the total annual income of the nts of the Colony is approximately £54,275,000. The derived from taxation was, as shown below, £2,681,883; nt, therefore, to a tax of 4·94 per cent. on the income of son in the community. Dividing the revenue derived from into the four main divisions of Customs, Excise, Stamps, nses, the amount received under each head during the 8 was—

Revenue from Taxation, 1888.

	£	£
:—		
ts	805,719	
s	51,125	
nd beer	77,418	
cco and cigars	207,554	
	100,730	
e and chicory	10,704	
r and molasses	122,108	
m	22,004	
	19,145	
l fruits	58,692	
alorem duties	2	
r specific duties	399,386	
led warehouse, 20 Vic., No. 21	8,401	
of goods in Queen's warehouses, &c.	70	
Total, Customs	....	1,883,058
–		
beer and porter	116,255	
on spirits distilled in the Colony	11,978	
on tobacco, cigars, and cigarettes	129,968	
cco factory license fees	1,375	
Total, Excise	....	259,576
	... .	409,658
:—		
lesale spirit dealers	8,820	
ioneers	4,737	
il and fermented spirituous liquors	99,251	
ard and bagatelle licenses	8,700	
llers and rectifiers	82	
kers and pedlers	2,648	
nbrokers	671	
nial wine, cider, and perry licenses	1,372	
nses under the Gunpowder Act of 1876	738	
nses to sell tobacco, cigars, and cigarettes	1,992	
other licenses	580	
Total, Licenses	....	129,591

SUMMARY:—

Customs	1,883,058	
Excise	259,576	
Stamps	409,658	
Licenses	129,591	
Total, Taxation		£2,681,883

Revenue from Customs and Excise.

Under the heads of Trade and Commerce will be found some particulars of the revenue from Customs as well as that obtained from Excise. The cost of collecting revenue by the Customs Department averages about three per cent., a very moderate sum, when the large area of the Colony and the length of its frontiers are considered.

Stamp Duties.

Stamp Duties were abolished in 1873, but reimposed in 1880. During 1888 they yielded a revenue of £409,658, or about 7s. 8d. per head, while the cost of collection was very trifling, amounting to £4,165, or about one per cent. of the amount received.

Probate Duty.

In addition to the above, a duty is levied on the value of estates of deceased persons, and on settlements of property taking effect after the death of the testator.

Sale of liquors.

The sale of fermented and spirituous liquors is regulated by Acts 45 Victoria No. 14, and 46 Victoria No. 24. Under the provisions of these Acts five descriptions of licenses are authorized:—

(*a*) Publicans' licenses, for which an annual fee of £30 is payable.

(*b*) Packet licenses—1st class, for vessels over 1,000 tons, £15; 2nd class, from 250 to 1,000 tons, £10; and 3rd class, for vessels of under 250 tons, with a license fee of £3.

(*c*) Colonial wine licenses, annual fee, £3.

(*d*) Booth or stand licenses, fee £2; and

(*e*) Brewers' or spirit merchants' licenses, fee £30 if within, and £20 if outside, the boundaries of the city of Sydney.

Revenue from publicans' licenses.

he revenue received during 1888 from these various licenses mounted to £109,525, of which £99,251 was from publicans nd similar retailers, £1,372 from colonial wine sellers, and 8,820 from brewers and spirit merchants. The following was he number of licenses issued during 1888:—

Publicans	3,368
Colonial wine	457
Distillers	1
Brewers	78
Spirit merchants	302
Total	4,206

Amended Licensing Act.

Besides the above, there were 51 licenses for the distillation of brandy, 6 for scientific distillation, and 4 apothecaries' distilling licenses. There were 858 holders of publicans' licenses in the metropolitan district, and 2,510 in the remainder of the Colony; in the former case representing 1 licensed house to every 427 residents, while in the latter the proportion is 1 to every 286 residents. During the past eleven years the number of licensed houses has increased from 3,312 to 3,368, although, as will be seen from the subsequent table, in proportion to population there has been a large decrease. There has been an absolute decrease in the number of houses since 1881, attributable to the operations of the Licensing Act, which came into force in that year. By this Act the granting of licenses was taken out of the hands of the ordinary Bench of Magistrates and entrusted to a Licensing Court, comprising magistrates specially appointed. The alteration in the composition of the Licensing Court led to a stricter scrutiny of applicants, and a consequent decrease in the number of licenses granted. The Act has also operated to decrease the number of hotels, by requiring a specified number of rooms for the accommodation of travellers, which proved, in numerous instances, to be in excess of that provided before the Act came into force.

LICENSED PUBLIC-HOUSES.

Year.	Number of Licensed Houses.			Number of Residents in District to each House.		
	Metropolitan.	Extra-Metropolitan.	Total.	Metropolitan.	Extra-Metropolitan.	Total
1878 ...	871	2,441	3,312	221	196	203
1879 ...	879	2,409	3,288	237	208	216
1880 ...	883	2,464	3,347	249	212	222
1881 ...	852	2,584	3,436	276	210	227
1882 ...	940	2,123	3,063	264	265	265
1883 ...	923	2,151	3,074	291	274	279
1884 ...	824	2,320	3,144	351	265	287
1885 ...	823	2,356	3,179	382	273	301
1886 ...	840	2,391	3,231	398	279	310
1887 ...	846	2,424	3,270	415	285	319
1888 ...	858	2,510	3,368	427	286	322

REVENUE FROM CROWN LANDS.

Revenue from Crown lands.

The income derived from the Crown lands of the Colony has varied very considerably during the eighteen years shown in a subsequent table, the lowest amount received being in 1871, when the revenue was only £497,978, or, at the rate of 19s. 7d. per head, while the greatest sum was obtained in 1877, when the receipts amounted to £3,236,277, or at the rate of £5 2s. 11d. per head of the population. The revenue for 1888 amounted to £2,268,253 grouped under the following heads :—

	£
SALES :—	
Auction sales	207,032
Improved purchases, &c.	86,913
Deposits on conditional purchases	102,906
Instalments on conditional purchases (inclusive of interest)	578,960
Balances on conditional purchases	100,980
Miscellaneous purchases	22,069
Total, Land sales	£1,098,880
Interest on land conditionally purchased	£113,403
PASTORAL OCCUPATION :—	
Pastoral leases (runs) 15 years	526,447
Conditional leases	87,896
Annual leases	22,554
Occupation licenses	252,121
Homestead leases, 15 years	27,266
Quit rents	906
Total, Pastoral occupation	£917,190

NING OCCUPATION :—	£
Mineral leases	62,904
Mineral licenses	5,427
Leases of auriferous lands	15,647
Miners' rights	7,678
Business licenses	3,691
Total, Mining occupation	£95,347
SCELLANEOUS LAND RECEIPTS :—	
Licenses to cut timber, &c.	18,497
Fees on transfer of runs	765
Fees on preparation and enrolment of title-deeds	3,858
All other receipts	20,313
Total, Miscellaneous Land receipts	£43,433
Total, Land revenue	£2,268,253

Falling off in land revenue.

A very great falling off in the land revenue will be observed m 1883 to 1886. This was due in the first instance to the ppage of auction sales in 1883, and secondly, to the difficulties countered in bringing the Crown Lands Act of 1884 into eration. These difficulties have now been overcome, with the sult that a considerable increase in revenue was obtained in 87 and 1888.

Land revenue.

The total income derived from land since 1871 is given below, ile the amount per head of population will be found on ge 587.

Year.	Land Revenue.	Year.	Land Revenue.
	£		
1871	497,978	1880	1,646,436
1872	840,453	1881	2,820,988
1873	1,137,914	1882	2,914,394
1874	1,426,166	1883	1,656,069
1875	2,020,629	1884	1,753,344
1876	2,773,003	1885	1,876,452
1877	3,236,277	1886	1,643,954
1878	2,325,704	1887	2,378,995
1879	1,632,024	1888	2,268,253

Revenue derived from sales and occupation of Crown lands.

The revenue derived from the Crown lands may be divided i two main classes—receipts from sales, and from pastoral, mini or other occupation. The amounts received under each head w as follows :—

Year.	Sales.	Occupation.	Year.	Sales.	Occupati
	£	£		£	£
1871	262,531	235,447	1880	1,382,026	264,4
1872	436,483	403,970	1881	2,483,338	337,6
1873	845,410	292,504	1882	2,455,041	459,3
1874	1,163,572	262,594	1883	1,269,469	386,6
1875	1,760,570	260,059	1884	1,363,483	339,8
1876	2,513,404	259,599	1885	1,314,357	562,0
1877	2,967,857	268,420	1886	1,206,438	437,5
1878	2,076,004	249,700	1887	1,221,776	1,157,2
1879	1,386,687	245,337	1888	1,212,283	1,055,9

Practice of treating proceeds of sales as revenue.

The practice of treating money derived from the sale of Cr lands as revenue obtains in all the Australian Colonies, and money so raised forms one of the largest items of their an income. In New South Wales the sums realized from this so have been in certain years so considerable as to leave a l surplus when all charges upon the public revenue have been defra

Revenue from Crown lands sold at auction.

The revenue derived from the sale of Crown lands may be divided into receipts from *(a)* Auction sales and selections a auction; *(b)* Improvements and other purchases; and *(c)* C ditional sales. Auction sales were to a large extent suspen in 1883, but previously to that year the income derived f this source was very large, as may be seen hereunder.

Year.	Auction sales.	Selections after auction.	Total.
	£	£	£
1871	92,994	24,530	117,524
1872	89,129	89,588	178,717
1873	300,229	104,496	404,725
1874	553,973	106,042	660,015
1875	1,019,053	102,440	1,121,493
1876	1,561,243	98,280	1,659,523
1877	1,967,057	166,730	2,133,787
1878	1,061,670	124,197	1,185,867
1879	698,981	66	699,047
1880	437,964	42,495	480,459
1881	566,404	351,885	918,289
1882	707,594	417,715	1,125,309
1883	179,403	37,480	216,883
1884	95,772	767	96,539
1885	116,014	....	116,014
1886	111,083	....	111,083
1887	172,553	....	172,553
1888	207,052	....	207,052

Large alienations at auction.

It will be observed that the alienation of the public estate by means of auction sales and unconditional selections after auction attained its highest point during the years 1875 to 1878. A temporary lull took place in the two following years, but in 1881 and 1882 the auction sales of Crown lands reached nearly the same proportions as before. It was not until it had become evident that this indiscriminate sale of the public estate was threatening to endanger the true interests of the country that this form of alienation was stopped. In 1883, auction sales were almost completely suspended, the receipts from this source immediately falling from £1,125,309 in 1882 to £96,539 in 1884 and £207,052 in 1888.

Limitation of auction sales.

The fact had forced itself upon the attention of the authorities that this wholesale alienation of Crown lands was not due to the demand created by the normal progress of settlement, but was the outcome of an unhealthy rivalry between the two principal classes of settlers—the pastoral tenants, and the free selectors. Besides this, the estate of the country was being parted with without any conditions as to improvements or settlement, and as the great object of land sales was to promote settlement, it was deemed advisable by the Government to temporarily suspend land sales by auction, and ultimately it was decided to sell only a limited area during any one year.

Improvement and pre-emptive purchases.

Another portion of the land revenue is obtained from the sales, without competition, to the legal occupiers, of Crown lands improved to the value of £1 per acre. To this form of alienation may be added purchases of land made by right of pre-emption on a fixed proportion of the total area held under lease in certain cases.

Revenue from improvement purchases and pre-emptive sales.

From these sources (improvement purchases and pre-emptive sales) the following amounts were received into the Colonial Treasury since the year 1877:—

Year.	Improvement Purchases.	Pre-emptive Right Sales.	Total.
	£	£	£
1877	133,357	77,263	210,620
1878	239,944	20,046	259,990
1879	156,471	4,743	161,214
1880	245,094	5,799	250,893
1881	494,262	2,908	497,170
1882	179,949	1,041	180,990
1883	116,558	1,345	117,903
1884	305,455	4,450	309,905
1885	413,935	29	413,964
1886	260,526	....	260,526
1887	166,117	....	166,117
1888	86,913	....	86,913

Revenue from conditional sales.

Conditional sales formed the main feature of the Land Act of 1861. From 1862, when these sales commenced, to 1888, the nominal area of land sold conditionally amounted to 27,129,577 acres, or equal to 13·6 per cent. of the total area of the Colony. The total receipts in respect of such land were:—

For deposit	£6,369,091
Balance and instalments of purchase money...	4,129,084
Interest	2,842,369
Total	£13,340,544

Total receipts from conditional sales.

The following table shows the gross amounts received during each of the thirteen years ending with 1888, as well as the total since this class of sales was first permitted.

Revenue from taxation.

It has been estimated that the total annual income of the habitants of the Colony is approximately £54,275,000. The venue derived from taxation was, as shown below, £2,681,883; uivalent, therefore, to a tax of 4·94 per cent. on the income of ch person in the community. Dividing the revenue derived from xation into the four main divisions of Customs, Excise, Stamps, nd Licenses, the amount received under each head during the ear 1888 was—

Revenue from Taxation, 1888.

	£	£
USTOMS :—		
Spirits	805,719	
Wine	51,125	
Ale and beer	77,418	
Tobacco and cigars	207,554	
Tea	100,730	
Coffee and chicory	10,704	
Sugar and molasses	122,108	
Opium	22,004	
Rice	19,145	
Dried fruits	58,692	
Ad valorem duties	2	
Other specific duties	399,386	
Bonded warehouse, 20 Vic., No. 21	8,401	
Rent of goods in Queen's warehouses, &c.	70	
Total, Customs	....	1,883,058
EXCISE :—		
Ale, beer and porter	116,255	
Duty on spirits distilled in the Colony	11,978	
Duty on tobacco, cigars, and cigarettes	129,968	
Tobacco factory license fees	1,375	
Total, Excise	....	259,576
STAMPS	... .	409,658
LICENSES :—		
Wholesale spirit dealers	8,820	
Auctioneers	4,737	
Retail and fermented spirituous liquors	99,251	
Billiard and bagatelle licenses	8,700	
Distillers and rectifiers	82	
Hawkers and pedlers	2,648	
Pawnbrokers	671	
Colonial wine, cider, and perry licenses	1,372	
Licenses under the Gunpowder Act of 1876	738	
Licenses to sell tobacco, cigars, and cigarettes	1,992	
All other licenses	580	
Total, Licenses	....	129,591

Large sums refunded.

The figures in the foregoing table represent the gross amount paid, but in the case of the deposits large sums were received which were afterwards refunded, as the ground applied for was not open to selection. The area set down as sold conditionally is on this account also greatly overstated, and, moreover, includes the area of selections which became forfeited for non-fulfilment of conditions, or on other grounds. The actual area sold conditionally up to the close of 1888 was 18,160,896 acres, but the conditions remain unfulfilled in respect of 16,593,144 acres.

The refunds of deposits paid on land conditionally selected have reached considerable amounts in some years, as will be seen from the following statement:—

Year.	Amount of refunds.	Year.	Amount of refunds.
	£		£
1879	12,255	1884	134,932
1880	28,256	1885	85,868
1881	72,475	1886	69,024
1882	92,804	1887	41,986
1883	132,092	1888	35,319

Revenue from pastoral occupation.

Another portion of the annual land revenue of the Colony is derived from rents for pastoral occupation, and mineral and other leases. During 1886 the revenue obtained from this source amounted to only £374,920, as the rents were collected according to the old assessment, but it was estimated that more than £500,000 was due at the close of the year for rents accumulating during the previous eighteen months. By an Act of the Legislature, assented to on the 13th July, 1887, the arrears of rent were made payable over a period of two years, with interest at the rate of 5 per cent. During 1887 the rents were paid on the basis of the new tenure, and a large increase is therefore observable under the head of pastoral leases and occupation licenses. The following table gives the annual revenue from pastoral occupation for the eleven years, 1878-88:—

Head of Revenue.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
	£	£	£	£	£	£	£	£	£	£	£
Pastoral leases............	165,775	158,776	165,952	221,149	343,333	273,486	268,155	140,436	131,893	644,279	526,447
Annual and special leases.....................	50,176	51,650	55,743	63,968	65,417	66,167	60,694	15,872	17,914	17,648	22,554
Conditional and auction leases.....................	......	......	......	......	......	......	......	37,592	59,558	67,974	87,896
Occupation licenses	......	......	......	......	......	......	......	294,686	153,493	329,010	252,121
Homestead leases	......	......	......	......	.. ...	......	......	15,801	10,660	20,167	27,266
Quit rents.........	141	407	930	886	494	477	507	202	1,402	456	906
Total	216,092	210,833	222,625	286,003	409,244	340,130	329,356	504,589	374,920	1,079,534	917,190

Revenue from Mining Leases.

The revenue derived from mining occupation has not been though somewhat brighter since 1884 than previous to that a circumstance due chiefly to the increased attention paid to mining. The following table gives the revenue under each for eleven years :—

Year.	Amount.	Year.	Amount.
	£		£
1878	11,663	1884	28,08
1879	13,933	1885	31,41
1880	20,251	1886	31,26
1881	20,283	1887	43,96
1882	20,248	1888	95,34
1883	17,748		

REVENUE FROM RAILWAYS AND OTHER SERVI

Revenue from services.

The revenue derived from services rendered now exce from either taxation or land,—the respective proportio each head for 1886, 1887, and 1888 being—

	1886 per cent.	1887 per cent.
Services	40·7	37·8
Taxation	34·4	31·0
Land	21·6	27·7
Miscellaneous	3·3	3·5

Government is owner of railways, &c.

The Government of New South Wales is the owner o railways constructed in the Colony, with the exceptio line between Moama and Deniliquin, and that from Hill to the South Australian border, the former 45 miles the latter about 36 miles. It owns, also, the entire te and telephonic system of the Colony, as well as the Po From these, and some other minor sources, the revenue under the head of Services, was obtained. The total received for Services during the year 1888, under the heads, was—

Revenue from Services during 1888.

	£	£
ay and tramway receipts	....	2,759,280
Office :—		
Postage	368,583	
Telegraph receipts	178,469	
Commission on money orders	15,857	
		562,909
receipts	....	10,906
for escort and conveyance of gold	....	445
age, harbour and light rates, and fees	....	63,056
tration of brands	....	1,355
c School fees	....	69,554
opolitan Water Rates	....	90,090
try Towns Water Rates	....	9,407
of office :—		
Certificates of naturalization	96	
Registrar-General	38,610	
Prothonotary of Supreme Court	7,016	
Master in Equity	2,536	
Curator of Intestate Estates	1,169	
Insolvent Court	3,826	
Sheriff	1,994	
District Courts	7,331	
Courts of Petty Sessions	9,243	
Shipping Masters	2,721	
Other fees	22,556	
		97,098
Total receipts from Services	£	3,664,100

The total revenue derived from Services during each year since 871 will be found in the following table, and the amount per head population will also be found in a subsequent table.

Total revenue from services.

Year.	Revenue from Services.	Year.	Revenue from Services.
	£		£
1871	561,679	1880	1,594,082
1872	659,770	1881	1,945,076
1873	728,875	1882	2,363,085
1874	770,895	1883	2,666,731
1875	858,497	1884	2,942,643
1876	965,327	1885	3,168,463
1877	1,119,532	1886	3,089,235
1878	1,183,582	1887	3,245,907
1879	1,328,302	1888	3,664,100

There was an increase during every year of the above series, 886 excepted, both in the total amount received and the rate per ad. The falling off in 1886 is due to a decline in the amount

Largest revenue obtained from railways.

The largest return for capital invested in railways was obtained in 1881, when the interest amounted to 5·307 per cent., a figure considerably in excess of the rate paid by the Colony for its railway loans. The average rate of interest payable on railway loans is slightly over 4 per cent., and that rate has been largely exceeded during five years of the past decade, while in the remaining years the interest has varied from 2·901 to 3·741 per cent. The deficiency for 1888 was 0·68 per cent., equivalent to about £190,328, which was made good out of the general revenue.

Revenue from tramways.

The revenue derived from the public tramways has increased year by year since the system was introduced in 1879, but the working expenses have also increased, though it is satisfactory to note that the expenses apparently reached a maximum in 1884, and the amount available towards the payment of interest has increased since that year. The earnings of the tramways, as well as the expenditure in connection therewith, will be found under Internal Communication, on page 504.

Revenue from Posts and Telegraphs.

The receipts from the Post and Telegraph services of the Colony have increased substantially year by year, but so also has the expenditure. Although the sum of £562,909 was obtained during 1888 from this source, the expenditure amounted to £616,371, showing a loss on the year's transactions of £53,462, in addition to the amount of interest payable on the debt incurred for these works. Though both the Postal and Telegraphic services are carried on as far as practicable on commercial principles, a deficiency is experienced every year. The reason of the deficit is found in the desire of the Government to extend the facilities of both the post and telegraph to every part of the Colony. And so important has this policy appeared that it has been carried out with considerable loss, as will be seen from the following table. It is quite possible that the principle of affording the benefit of postal and telegraphic communication to every district of New South Wales would be adhered to even if the system ultimately failed to become self-supporting; but the time cannot be far distant when the revenue derived will more than meet the expenses.

Postal and Telegraphic Services.

Revenue and Expenditure.

Year.	Revenue.	Expenditure.	Year.	Revenue.	Expenditure
	£	£		£	£
1877	224,449	311,614	1883	403,794	504,055
1878	226,405	351,642	1884	442,964	542,182
1879	259,170	383,391	1885	472,564	570,999
1880	286,134	396,301	1886	486,218	610,651
1881	330,414	421,594	1887	524,298	634,077
1882	358,525	446,658	1888	562,909	616,371

Receipts from Miscellaneous Services.

The miscellaneous receipts under the head of Services co prise fees of office, which amounted to £97,098 in 1888. Publ school fees, £69,554; pilotage and harbour fees, £63,056; mi and escort receipts, £11,351; registration of brands, £1,35 Metropolitan water rates, amounting to £90,090; and count towns water rates, £9,407; the total being £341,911. T revenue derived from the services above mentioned are mere nominal, as the cost and value of the service performed general far exceed the revenue. The amount received during each ye from 1871 to 1888, was:—

Year.	Miscellaneous Services.	Year.	Miscellaneous Services.
	£		£
1871	81,534	1880	118,384
1872	88,929	1881	154,978
1873	86,803	1882	176,466
1874	88,334	1883	181,809
1875	95,825	1884	197,666
1876	96,053	1885	203,209
1877	95,136	1886	213,879
1878	96,892	1887	201,274
1879	92,234	1888	341,911

Miscellaneous items of revenue.

The revenue derived from other sources besides Taxation, Land and Services, amounted to only £272,124 in 1888, made up chief by rents, fines, and forfeitures, and a variety of miscellaneo receipts, as will be seen hereunder.

	£
Rents of Government Property other than land	64,073
Fines and forfeitures	18,025
Interest on bank deposits	33,598
Other receipts	156,428

Revenue per head of the population.

The total revenue of the Colony amounted in 1888 to £8 7s. er head, which, though nominally a very large sum compared ith the revenue of other countries, falls short of the highest mount received in any year, viz., £9 6s. 8d., in 1882, by 19s. 8d. nder the present system of taxation it is anticipated that the evenue will average about £8 per head ; and though an increase ay be expected in the gross amount obtained under each branch f revenue it is scarcely probable that the amount received per ead will advance beyond the rate of 1888, especially as the ncrease in land revenue will not be proportionate to the increase n population.

Revenue per head from various sources.

The amounts received per head of population under each sub- ivision during the years 1871–1888 were—

Taxation and Revenue per Head.

Year.	Taxation.	Land Revenue.	Services.	Miscellaneous.	Total Receipts.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1871	2 1 10	0 19 7	1 2 1	0 4 7	4 8 1
1872	2 5 7	1 11 11	1 5 1	0 4 2	5 6 9
1873	2 10 2	2 1 9	1 6 9	0 3 8	6 2 4
1874	2 2 6	2 10 6	1 7 4	0 4 2	6 4 6
1875	1 18 5	3 9 2	1 9 4	0 4 3	7 1 2
1876	1 18 5	4 11 9	1 11 11	0 4 7	8 6 8
1877	1 19 3	5 2 11	1 15 7	0 5 2	9 2 11
1878	1 19 10	3 10 8	1 16 0	0 5 3	7 11 9
1879	1 16 10	2 7 3	1 18 6	0 7 2	6 9 9
1880	1 19 1	2 5 4	2 3 11	0 7 1	6 15 5
1881	2 6 7	3 14 2	2 11 2	0 4 8	8 16 7
1882	2 7 11	3 13 4	2 19 5	0 6 0	9 6 8
1883	2 5 4	1 19 8	3 3 11	0 6 2	7 15 1
1884	2 8 10	1 19 10	3 6 10	0 6 1	8 1 7
1885	2 8 4	2 0 6	3 8 0	0 6 2	8 3 0
1886	2 13 4	1 13 7	3 3 0	0 5 1	7 15 0
1887	2 12 2	2 6 6	3 3 6	0 5 8	8 7 10
1888	2 10 5	2 2 8	3 8 10	0 5 1	8 7 0

PUBLIC EXPENDITURE.

Expenditure per head of the population.

The expenditure of the Colony, exclusive of loans during the ten years which closed with 1888, amounted on an average to £8 13s. 8d. per head—the amount for the five years 1883 to 1887 considerably exceeding this average. During 1888 the gross expenditure amounted to £8,778,851, of which sum £7,789,901 was expended on account of services rightly chargeable to the year itself, whilst the balance, amounting to £988,950, was for the service of 1887 and previous years.

Expenditure under various heads in 1877 and 1888.

The percentage of expenditure has been grouped under seven heads, as shown below, with the object of comparing the present expenditure with that of eleven years ago. The proportion falling under each head of service during the years 1877 and 1888 respectively, was—

Expenditure on Services.	1877.	1888.
	per cent.	per cent.
Railways and Tramways	10·08	20·78
Post and Telegraphs	6·93	7·02
Other Public works	17·91	11·86
Public debt charge	13·15	19·88
Immigration	1·54	·09
Public Instruction	6·17	7·77
Other services	44·22	32·60

Increase in expenditure, to what traceable.

The most notable increase observable is in the proportion of total revenue expended on railway and tramway services. The increase in the proportion expended on education is also large, while the payments on account of the Public Debt have advanced from 13·15 to 19·88 per cent., which is less serious than at first sight appears, as a large part of the debt charges are recouped by the earnings of works constructed out of the loan funds. The absolute amount expended during each of the past twelve years was—

Year.	Railways and Tramways.	Post and Telegraphs.	Other Public Works.	Interest on Debt and Extinction of Loan.	Immigration.	Public Instruction.	Other Services.	Total Expenditure.
	£	£	£	£	£	£	£	£
1877	453,598	312,226	806,325	591,744	69,332	277,666	1,990,319	4,501,210
1878	698,416	352,157	1,058,762	587,552	95,122	383,711	1,902,631	5,078,381
1879	809,245	383,391	1,314,819	584,339	82,123	387,786	2,277,448	5,839,151
1880	838,559	396,301	1,224,521	715,994	43,522	385,567	1,955,615	5,560,079
1881	786,269	421,594	1,139,671	719,752	45,966	552,363	2,118,068	5,783,683
1882	1,031,720	446,658	1,132,041	969,198	46,301	665,901	2,056,386	6,348,205
1883	1,439,327	504,055	1,262,806	927,905	112,319	879,120	2,669,481	7,795,013
1884	1,585,603	542,182	1,494,983	1,047,322	120,038	817,767	2,803,944	8,411,839
1885	1,729,894	570,999	1,323,991	1,300,184	52,050	751,335	2,833,681	8,562,134
1886	1,710,495	610,651	1,248,877	1,579,689	35,397	741,121	3,151,417	9,077,647
1887	1,695,716	634,077	1,179,031	1,692,421	32,251	728,003	3,254,693	9,216,192
1888	1,824,291	616,371	1,040,746	1,745,695	7,854	682,225	2,861,669	8,778,851

Increase of public expenditure.

In a country advancing so rapidly in population as New South Wales the value of figures, such as are given in the above table, is apt to be misunderstood, for, though the absolute increase in public expenditure during the twelve years amounts to 95 per cent, the population has increased 68 per cent. Nor must the fact be overlooked that much of what is now expended out of current revenue is for the advantage of future years, and for the development of the resources of the country; and that the expenditure on certain services is incurred in order to obtain additional revenue. But even when such allowance is made it will be found there has been no slight advance, especially in some years since 1882, as will be seen from the table here given of the expenditure per head under the several groups.

Expenditure per Head, exclusive of Expenditure from Loans.

Year.	Railways and Tramways.			Post and Telegraphs.		Other Public Works.			Interest on Debt, &c.		Immigration.		Public Instruction.		Other Services.			Total Expenditure		
	£	s.	d.	s.	d.	£	s.	d.	s.	d.	s.	d.	s.	d.	£	s.	d.	£	s.	d.
1877	0	14	5	9	11	1	5	8	18	10	2	2	8	10	3	3	3	7	3	1
1878	1	1	3	10	8	1	12	2	17	10	2	11	11	8	2	17	10	7	14	4
1879	1	3	5	11	1	1	18	1	16	11	2	4	11	2	3	5	11	8	9	1
1880	1	3	1	10	11	1	13	9	19	9	1	2	10	7	2	13	11	7	13	2
1881	1	0	8	11	1	1	10	0	18	11	1	3	14	6	2	15	9	7	12	2
1882	1	5	11	11	3	1	8	6	24	5	1	2	16	9	2	11	7	7	19	7
1883	1	14	6	12	1	1	10	3	22	3	2	8	21	1	3	4	0	9	6	10
1884	1	16	0	12	4	1	13	11	23	9	2	9	18	7	3	3	8	9	11	0
1885	1	17	2	12	3	1	8	5	27	11	1	1	16	2	3	0	11	9	3	11
1886	1	14	11	12	5	1	5	6	32	3	0	9	15	1	3	4	4	9	5	3
1887	1	13	3	12	5	1	3	1	33	1	0	7	14	2	3	3	8	9	0	3
1888	1	14	3	11	7	0	19	7	32	10	0	2	12	10	2	13	9	8	5	0

Increase of expenditure on railways and tramways.

The expenditure on account of railways and tramways shows the largest increase during the period comprised in this table, amounting to 19s. 10d. per head.

The length of railway line in operation in 1877 was only 598 miles, while in 1888 the mileage had increased to 2,125, involving a proportionately large outlay for maintenance and working expenses, but, at the same time, bringing in revenue, which advanced much more rapidly than the expenditure. The tramway system, too, was inaugurated in 1879, and involved an expenditure of about 4s. 1d. per head in 1888, for which there was, of course, no corresponding expenditure in 1877. The expense of the Public Debt has advanced 14s.; Public Instruction, 4s.; Post and Telegraphs, 1s. 8d.

Increase of expenditure on education.

The expenditure per head on account of Public Instruction, though considerably larger in 1888 than eleven years previously, was 8s. 3d. less than in 1883. The Public Instruction Act of 1880, abolishing State aid to denominational education, necessarily involved an increased expenditure from Public Revenue to supply the place of schools closed under the Act. The greatest activity was, therefore, displayed, especially during the year 1883, immediately following the closing of the denominational schools, both in the building and equipment of public schools, hence the increased expenditure per head noticeable in the table given above. Since 1883 the expenditure rapidly declined, and has now almost reached the normal average.

The increase in the expenditure for 1888 over 1877 upon Post and Telegraphs represents really an advance in the average business transacted by each member of the community, and is accompanied by a corresponding increase in the receipts from this service.

The expenditure upon public works during 1888 was slightly less per head than in 1877, and considerably below most of the intervening years. The large surplus which the Government had at its disposal during the period immediately following 1877, enabled a profuse expenditure on public works, which, under other circumstances, might not have been undertaken; hence the large increase during the years in which the surplus was available. The absence of an Act placing the responsibility of local works upon the persons actually concerned has necessitated the expenditure, out of the public funds, of large sums upon works only locally important, and, therefore, not strictly chargeable to the public revenue. The Local Government Bill now before Parliament proposes to remedy this state of things, and a decrease in the expenditure upon public works may be anticipated.

Expenditure for other services

Under the head of "Other Services" are included Civil Administration, Defence, Administration of Lands, Mining, and Law. The expenditure per head has been fairly uniform from year to year.

Accumulated surplus revenue at the close of each year.

The accounts of the Treasury are closed on the 31st December in each year, so that the amounts of expenditure given in the preceding tables refer to the payments made during the currency of any year, irrespective of the date at which the liability occurred or was authorized. Thus payments during 1873 included liabilities as old as 1868; while some payments in 1878 were on account of 1873 and each of the intermediate years. Similar payments occur in every year, so that the figures relating to expenditure can only be taken as a partial presentation of the financial case of the country. The following figures are self-explanatory and cover the last sixteen years; they show the actual as well as the apparent expenditure during this period.

Year.	Expenditure for Services of each year irrespective of date of payment.*	Expenditure during each year for Services of that and previous years.	Expenditure during each year out of accumulated surplus.	Total expenditure during each year.
	£	£	£	£
1873	2,568,605	2,333,166	....	2,333,166
1874	2,965,464	2,939,227	....	2,939,227
1875	3,378,896	3,346,324	.. ..	3.346,324
1876	3 872,064	3,769,213	....	3,769,213
1877	5,369,833	4,551,652	....	4,551,652
1878	5,079,397	5,100,326	....	5,100,326
1879	4,976,649	5,255,034	584,117	5,839,151
1880	4,977,481	5,228,792	331,287	5,560,079
1881	5,264,448	5,376,160	407,523	5,783,683
1882	6,330,936	5,824,245	523,960	6,348,205
1883	6,901,525	7,062,948	732,065	7,795,013
1884	7,657,829	7,813,414	598,425	8,411,839
1885	9,307,756	8,320,523	241,611	8,562,134
1886	8,532,463	9,005,178	72,469	9,077,647
1887	8,707,672	9,202,377	13,815	9,216,192
1888	7,769,690	8,758,640	20,211	8,778,851

* Liabilities outstanding at the close of 1888 for that and previous years are not included.

Surplus revenue.

During the fourteen years which elapsed from 1872 to 1885, New South Wales presented the spectacle, then almost unique in these colonies, of a government with a large surplus of revenue at its disposal. The amount standing to the credit of the Consolidated Fundat the close of each year from 1872 to 1885, was :—

Year.	Accumulated surplus.	Year.	Accumulated surplus.
	£		£
1872	132,238	1879	1,341,619
1873	925,069	1880	1,440,228
1874	825,605	1881	2,927,435
1875	1,110,992	1882	3,888,753
1876	1,945,807	1883	2,511,016
1877	2,351,074	1884	1,229,338
1878	1,922,784	1885	2,900

Advances made from surplus.

The figures given above represent the amounts actually at the credit of the current account of the Consolidated Revenue. The actual surplus differed somewhat from these amounts, by reason of temporary advances made to loan or other funds out o accumulated surplus. The gross credit balance at the close of 1878 was £3,872,784. The years 1881 and 1882 also yielded surpluses to the extent of £1,441,338 and £1,086,308 in each year as named, making a total surplus of £6,400,430. For the services of 1878 and previous years the sum of £1,377,321 was expended, while in 1879, 1880, 1883, and 1884 the income was exceeded by £1,306,267, thus reducing the surplus to £3,716,842, at the close of 1884. Specific appropriations were made by Parliament out of this sum to the extent of £3,419,174, and £119,993 was written off; thus leaving a balance retained for expenditure at the close of 1884 of £177,675, the difference between the amount just stated and that shown in the preceding table having been temporarily advanced to revenue from various sources.

Proposals for meeting deficit.

The state of things depicted above was entirely changed during 1886. The disbursements from 1883 to 1886 were nominally more than the income, chiefly through the large appropriations of the surpluses of former years. Thus the year 1885 closed with a sum of £2,900 to the credit of the Revenue Fund, while 1887 opened with a nominal deficit of £1,286,581, and 1888 with a deficit of £2,179,580. In his financial statement, made on the 10th April, 1889, the Treasurer gave the amount of the deficit on the 31st March previous as £2,608,237. A proposal for wiping out this deficit has since been agreed to by Parliament; it is proposed to treat it as matter quite apart from the ordinary finances of the year, and to raise the amount on Treasury bills, to meet which £150,000 will be set aside every year.

LOANS.

First loan issue in 1841.

Growth of the Public Debt.

On the 28th December, 1841, a loan of £49,500 was issued for the purposes of immigration, having a currency of two years, and bearing interest at the rate of 5¼d. per day for each £100, or at the rate of 8 per cent. per annum. Loans for similar purposes were raised during the years 1843–6, but were met out of revenue within a few years of the date of raising. In 1851, however, a sum of £79,600 was borrowed, also for immigration purposes, part only of which was paid out of the general revenue, the remainder being met by a fresh loan; and though no loans raised prior to 1853 remain outstanding, the loan of 1851 must be taken as the actual commencement of the Public Debt of New South Wales. From 1853 to the close of 1888, the total sum authorized to be raised by loan was £59,133,865, and the amount of debentures and inscribed stock issued and sold was £47,273,019. The gross sum realized by the floating of the various loans was £45,346,681. Securities were, however, redeemed absolutely to the extent of £3,172,870. Thus, at the close of 1888, the total of loans outstanding was £44,100,149, and the sum still to be raised, £13,669,283. The ostensible purpose for which the loans were raised, as well as the proportions chargeable to each service, are shown in the following table; it must be remembered that the ums do not represent the expenditure on account of the services entioned.

Purposes for which loans were raised

Services.	Principal.			Interest.		
	£	s.	d.	£	s.	d.
ailways and Tramways	36,436,113	5	5	1,429,352	11	4
lectric Telegraphs	700,598	14	0	30,765	7	10
arbours and Rivers Navigation	2,099,314	9	7	85,632	17	5
oads and Bridges	600,182	15	7	26,920	6	2
mmigration	384,463	4	0	18,703	2	2
ewerage Works	569,123	1	8	23,014	0	2
Vater Supply Works	1,685,719	11	5	67,193	7	10
Miscellaneous Public Works	1,624,634	7	6	63,225	18	7
Total £	44,100,149	9	2	1,744,807	11	6

Present amount of public debt.

The present amount of the public debt is undoubtedly large; but no portion of it is due to war charges, and very little to works of an entirely unproductive character, so that the burden on the resources of the country is more apparent than real. The assets of the Colony amount to considerably more than four times the liabilities, and for the most part comprise securities which could readily be converted into money. At a moderate computation the public resources of New South Wales are estimated to be worth, £174,000,000, according to the details given on page 604.

Estimated value of the public resources.

Expenditure incurred on reproductive works.

The bulk of the expenditure shown in the above statement has been incurred on directly reproductive works, yielding, or capable of yielding, revenue towards meeting the charge for interest. The other works, not directly productive, have been undertaken for the development of the resources of the Colony, and for facilitating settlement. The net revenue from the public works of the country is almost entirely comprised in that derived from railways, as some of the most important works, such as sewerage of the metropolis, have not yet been finished, and, consequently, do not bring in any appreciable income. When, however, these undertakings are completed, and the railways are in full operation, the sum available to meet interest and other charges will leave little to be made good from the general revenue of the Colony. The approximate amount of interest paid during 1888 on loan money actually expended was £1,701,808; this sum is less than given in the next table, which includes, besides interest, payments in

Revenue from reproductive works.

reduction of debt and interest on balance unexpended; the net revenue from works constructed out of loan funds was £1,116,700, leaving a deficit on this account of £595,108.

Expenditure from loans and public debt.

The following statement shows the amount of loans authorized by Parliament for public purposes, the amount raised, the expenditure during each year, and the interest paid, as well as the rates per head of population.

Expenditure from Loans and Interest paid from 1877 to 1888, with total sum authorized to be raised, and Public Debt.

Year.	Total expenditure from Loans at the close of each year.		Expenditure from Loans during each year.	
	* Amount.	Per head total population.	Amount.	Per head mean population.
	£	£ s. d.	£	£ s. d.
1877	14,349,506	22 5 10	995,454	1 11 8
1878	15,165,823	22 11 5	816,317	1 4 10
1879	16,437,528	23 3 4	1,271,705	1 16 10
1880	18,106,147	24 8 1	1,668,619	2 6 [illegible]
1881	20,503,515	26 6 7	2,397,368	3 3 1
1882	23,336,274	28 15 7	2,832,759	3 11 [illegible]
1883	26,601,985	31 0 3	3,265,711	3 18 [illegible]
1884	30,276,692	33 9 10	3,674,707	4 3 5
1885	34,172,837	35 13 6	3,896,145	4 3 8
1886	37,939,193	37 17 3	3,766,356	3 16 10
1887	39,918,697	38 5 6	1,979,503	1 18 8
1888	42,397,104	39 1 3	2,478,406	2 6 7

Year.	Expenditure on account of interest and reduction of debt during the year.		Loans authorized, but not yet raised.	Public debt at close of each year.	
	Amount.	Per head mean population.		Amount.	Per head total population.
	£	£ s. d.	£	£	£ s. d.
1877 ...	517,359	0 16 5	4,481,742	11,724,419	18 4 3
1878 ...	517,377	0 15 9	4,481,647	11,688,119	17 7 11
1879 ...	516,249	0 14 11	8,729,123	14,937,419	21 1 1
1880 ...	647,294	0 17 10	9,891,123	14,903,919	20 1 9
1881 ...	647,642	0 17 0	16,585,993	16,924,019	21 14 [illegible]
1882 ..	727,988	0 18 4	16,585,993	18,721,219	23 1 [illegible]
1883 ...	798,620	0 19 2	13,581,487	24,632,459	28 14 [illegible]
1884 ...	977,899	1 2 2	19,261,462	30,101,959	33 6 [illegible]
1885 ...	1,230,441	1 6 5	14,314,123	35,564,259	37 2 [illegible]
1886 ...	1,579,679	1 12 2	12,262,623	41,034,249	40 19 [illegible]
1887 ...	1,602,421	1 11 4	12,262,623	40,995,350	39 6 [illegible]
1888 ...	1,745,695	1 12 10	13,669,283	44,100,149	40 14 [illegible]

* When the figures in this column exceed the amount of loans raised, advances been made to loan funds from Consolidated Revenue or other funds.

Increase of the public debt.

The net increase in the public debt during the ten years, which nded with 1888, was £32,412,030, involving an increase in the nnual charge for interest of £1,186,019. During the same period he indebtedness per head advanced from £17 7s. 11d. to 40 14s. 6d., and the charge per head for interest, not including eduction of debt, from 16s. 7d. in 1878 to £1 12s. 2d. in 1888.

Advances from surplus revenue.

Owing to the large surplus revenue available during the greater art of the period embraced in the table given above, the amount f public debt was less than the sum actually expended on account f loans, as advances were made in anticipation of loans authorized o be floated in the London market. The advances in some years eached considerable sums. This was noticeable in 1882, when the total of such advances, being the difference between the amount expended and that raised, was not less than £4,615,055. In 1885, however, the balance of surplus revenue available for advances disappeared, and the loans raised have, therefore, since that year exceeded the expenditure chargeable to loan votes, as will be seen by the statement given above, the unexpended balance in hand at the close of 1888 being £1,703,045.

Increase of public debt greater than that of population.

Taking the expenditure from loan votes as a measure of the increase of the Colony's indebtedness, it will be seen that during the years 1878–88 the total expenditure increased more than 195 per cent., a rate of growth much more rapid than that of the population—the expenditure per head in 1877 amounting to £22 5s. 10d., while eleven years later it had advanced to £39 1s. 3d., a rate of increase averaging 5·23 per cent. per annum. In few countries of the world would this rate of increase be justifiable, but in New South Wales, whose immense resources are still in a state of partial development, the expenditure gives cause for no uneasiness to the creditors of the Colony. The total expenditure during the last twelve years amounted to £29,200,018, of which £22,211,224 was for railways, £280,457 for telegraphs, and £3,412,699 for water and sewerage, the remaining expenditure, amounting to £3,295,638, was incurred mainly for works and buildings necessary for the development of the resources of the Colony or incidental to its progress.

Cost of public works charged to general revenue.

It has been a practice of long standing to charge the cost of constructing public works, other than those of national importanc or built equally for the requirements of the future as of to-day, t the general revenue of the Colony. This practice is rarely departe from, and the amount of loans spent on works which do not com within such definition is comparatively trifling. The subsequen table gives the amount of the public debt at the close of eac year since 1869. It will be seen that the increase for the firs ten years in the indebtedness was very small, averaging less tha £240,000 per annum; hence it is that, when in the latter years much greater activity was manifest in the construction of publi works, the average increase was at the rate of nearly £3,300,00 per annum, though the mean yearly increase spread over th whole period of nineteen years was only £1,820,000.

Public debt, 1869-88.

Year.	Public Debt.	Year.	Public Debt.
	£		£
1869	9,546,030	1879	14,937,419
1870	9,681,130	1880	14,903,919
1871	10,614,330	1881	16,924,019
1872	10,773,230	1882	18,721,219
1873	10,842,415	1883	24,632,459
1874	10,516,371	1884	30,101,959
1875	11,470,637	1885	35,564,259
1876	11,759,519	1886	41,034,249
1877	11,724,419	1887	40,995,350
1878	11,688,119	1888	44,100,149

Provision for extinction of loans.

By the Act 31 Vic., No. 11, provision was made for the gradual extinction of the loan raised under it, so that during the years when no money was borrowed the amount of indebtedness was less than in the previous year, as shown in the foregoing tables. Of the sum in which the Colony stood indebted, £16,383,660 was in debentures, and the balance, £27,716,489, in inscribed and funded stock. The following table gives particulars of loans floated since 1858, and from it may be seen the great improvement which has taken place in the credit of the Colony. To complete the comparison the result of the loan of April, 1889, has been included.

Loans floated since 1858.

Date of Loan.	Years' Currency.	Amount of Loan.	†Amount raised.	Average rate per cent., less charges.	Nominal Interest per cent.	Real Interest per cent.		
		£	£			£	s.	d.
1858	30	130,400	125,888	90·56	5	5	13	3
1859	30	818,100	816,778	99·09	5	5	1	3
1860	30	560,900	560,654	99·20	5	5	1	0
1861	30	206,960	205,887	98·85	5	5	1	7
1862	30	495,500	485,391	97·22	5	5	3	10
1863	30	610,000	613,247	99·78	5	5	0	3
1864	30	288,300	287,609	99·01	5	5	1	5
1865	30	292,800	269,974	91·49	5	5	11	6
1866	30	1,001,900	899,216	88·49	5	5	16	4
1867	30	312,800	267,448	84·32	5	6	2	1
1868	30	1,500,000	1,430,204	88·52	5	5	16	4
1869	...	1,000,000	981,655	96·85	5	5	4	2
1870 1871	30	985,100	973,696	97·91	5	5	2	11
1872	30	406,800	422,696	103·90	5	4	15	2
1873	*	222,284	217,270	97·74	4	4	2	1
1874	*	282,955	268,808	95·00	4	4	5	11
1875	30	1,000,000	900,581	89·42	4	4	13	0
1876	30	901,500	837,180	92·22	4	4	9	4
1879	30	3,249,500	3,199,443	97·81	4	4	2	8
1881	30	2,050,000	2,120,639	102·23	4	3	17	5
1882	30	2,000,000	2,042,916	100·29	4	3	19	6
1883	50	3,000,000	3,001,067	97·56	4	4	2	4
1883	50	3,000,000	3,018,790	98·09	4	4	1	10
1884	40	5,500,000	5,152,385	91·17	3½	3	18	11
1885	40	5,500,000	5,042,041	89·02	3½	4	1	3
1886	40	5,500,000	5,247,692	91·67	3½	3	18	4
1888	30	3,500,000	3,626,341	102·03	3½	3	8	7
1889	30	3,500,000	3,584,000	101·69	3½	3	8	10

* Interminable. † Gross proceeds, without deduction for charges.

Nominal rates of interest.

The nominal rate of interest paid on the loans of the Colony was 5 per cent. until 1872, and the net amount received per cent., after deducting all charges, varied from 84·32, in 1867, to 103·90, in 1872; the rate of interest in the former case being £6 2s. 1d. per cent., and in the latter £4 15s. 2d. In 1873, the value of New South Wales 5 per cent. loans having risen considerably above par, the new loans were floated at 4 per cent. The highest price obtained for a 4 per cent. loan was £102 4s. 7d. per cent. net, after all charges had been paid, being that received for the loan of 1881. The net interest on this loan amounted to £3 17s. 5d. per cent., the lowest rate at which money was borrowed by the Colony until the loan of 1888 was floated. In 1884 the nominal rate of interest was fixed at 3½ per cent., at which rate £23,500,000 has been raised. The loan placed on the market in April, 1888, was the most successful yet floated, the average rate per £100, after all expenses were paid, having been £102 0s. 8d. Since then—April, 1889—a further loan of £3,500,000 was placed in London, the average price obtained being £102 8s. This sum, however, includes charges which may approximately be set down at somewhat over 1½ per cent. But the loan carried only three months' interest instead of six months, as in the case of the previous issue, and will probably be found to be only 6s. 8d. per cent. worse than the most successful loan yet issued.

Recent Loans of Australian Colonies.

The following statement shows the terms on which the principal colonies were able to borrow in the London market during the past two years :—

Loans Floated.	Amount.	Average Price.			Net Interest per cent. to Investors.		
	£	£	s.	d.	£	s.	d.
1888.							
Victoria 4 per cent.	1,500,000	108	13	10	3	13	6
New South Wales 3½ per cent. ...	3,500,000	103	12	2	3	7	7
1889.							
Victoria 3½ per cent.	3,000,000	103	6	0	3	7	8
South Australia 3½ per cent.	1,317,000	100	2	11	3	9	11
Tasmania 3½ per cent.	1,000,000	98	5	8	3	12	5
New South Wales 3½ per cent. ...	3,500,000	102	8	0	3	8	4
Western Australia 4 per cent.......	100,000	108	2	1	3	12	9

e selling price of a loan is not perhaps the most exact test ı may be applied to ascertain the credit of a country in the on markets. There are many causes which may combine luence adversely the price obtained by tender, and it will be nt that in some of the instances given in the foregoing the selling price of loans was influenced by circumstances ely apart from the credit of the colonies concerned. A truer of credit will be found in the selling price and interest ed to investors by representative stock at a given date. The ving table, compiled from data given by the *Economist*, shows nterest returned by the stock of different colonies in June, due allowance being made in each case for redemption and conditions affecting the price. Similar figures for the same h of 1868 and 1878 have been added :—

Selling price of Australian stock

Country.	1868.			1878.			1888.		
	£	s.	d.	£	s.	d.	£	s.	d.
la	5	12	6	4	9	0	3	4	0
South Wales	5	0	0	3	16	3	3	6	9
ria	4	17	6	4	2	6	3	7	9
Zealand	5	1	3	4	15	0	4	2	6
ısland	5	6	3	4	5	0	3	14	6
Australia	5	2	6	4	2	6	3	12	0
ania	5	8	9	4	12	6	3	17	6
of Good Hope	5	1	3	4	11	3	3	14	6
	5	11	3	4	11	3	3	17	0
itius	5	5	0	4	8	9	3	14	6
	3	13	9	3	10	6	3	6	0

e improvement in the credit of all the colonies is obvious, and e rates given New South Wales could borrow £100 to-day at ame cost as £66 could be obtained twenty years previously. ıne, 1888, British consols were selling at a rate which would £2 12s. 6d. per cent. interest; Canadian and Indian stock also selling at better, if only slightly better, rates than New h Wales. This is certainly anomalous, as there is nothing in

Improvement in value of stock.

the history of these countries, or in the nature of their resources, to warrant even the slight preference shown to their stock above that of New South Wales or Victoria.

Inscribed Stock Act of 1883.

The old method of raising loans was superseded by the Inscribed Stock Act of 1883. Under the Act in question the loans of the Colony are negotiated by the Bank of England; and the expenses of the last four loans are shown in the accompanying table.

Sales of Inscribed Stock negotiated in London by the Bank of England.

Amount of principal.	Currency, in years.	Date from which interest accrued.	Gross proceeds.	Average rate per cent. at which sold.			Charges.						Net proceeds.
							Brokers' commission.	Bank commission.	Discount on balance of scrip. paid up in full.	Stamp duty.	Petty expenses.	Total.	
£			£	£	s.	d.	£	£	£	£	£	£	£
5,500,000	40	Oct. 1884	5,152,386	93	13	7	13,730	27,500	9,573	34,375	559	85,737	5,066,649
5,500,000	40	Oct. 1885	5,042,041	91	13	5	13,656	27,500	18,391	34,375	780	94,702	4,947,339
5,500,000	40	July 1886	5,247,692	95	8	3	13,713	27,500	14,443	34,375	768	90,799	5,156,893
3,500,000	30	Mch. 1888	3,626,341	103	12	2	8,729	17,500	6,341	21,875	651	55,096	3,571,245

The charges incidental to the floating of the loans amounted to 1·56, 1·72, 1·65, and 1·00 per cent. respectively upon the capital value, but on the gross amount raised the percentage for each loan was 1·66, 1·88, 1·73, and 1·52 per cent.

Relation between loans and imports and exports.

The loans raised in England do not come to the Colony as coin, but as merchandise, and from the greater portion of the excess of imports over exports, which is so marked a feature in the trade of these colonies. The following table shows the trade of lony for twenty years, and the increase in the amount of blic debt during each year. Making allowance for the ection of the trade returns, it is evident how close the con- is between the loan expenditure and the excess, or other- f the imports.

Imports, Exports, and Expenditure from Loans.

	Imports.	Exports.	Excess of Imports.	Excess of Exports.	Loans Expenditure.
	£	£	£	£	£
	8,392,753	9,933,442	....	1,540,689	982,000
	7,757,281	7,990,038	....	232,757	135,100
	10,933,508	11,259,909	....	326,401	933,200
	9,567,843	10,476,654	....	908,811	158,900
	10,959,864	12,618,755	....	1,658,891	69,185
	11,645,420	12,398,518	....	753,098	*326,044
	13,735,133	13,797,397	....	62,264	954,266
	13,800,505	13,061,412	739,093	....	288,882
	14,852,778	13,457,900	1,394,878	....	995,454
	15,104,645	13,134,405	1,970,240	....	816,317
	14,503,826	13,131,931	1,371,895	....	1,271,705
	14,176,063	15,682,802	....	1,506,739	1,668,619
	17,587,012	16,307,805	1,279,207	....	2,397,368
	21,467,899	17,677,355	3,790,544	....	2,832,759
	21,522,841	20,262,273	1,260,568	....	3,265,711
	23,160,916	18,577,290	4,583,626	....	3,674,707
	23,737,461	16,750,107	6,987,354	....	3,896,145
	20,973,548	15,556,213	5,417,335	....	3,766,356
	18,806,236	18,496,917	309,319	....	1,979,503
	20,885,557	20,859,715	25,842	....	2,478,406

* Reduction.

Net amount of British money invested 1869-86.

increase in the public debt during the period covered by egoing table, but not including the unexpended balance at se of 1888, was £32,238,539. The payments on account rest on loans, however, amounted to about £15,316,669, the net amount of British money imported into New Wales by the Government as about £16,911,870. The of imports during the same period, as shown above, was 0,251, or £5,228,381 more than the net amount of the ds of loans which reached New South Wales. This differ- spread over twenty years, and equals only about £260,000 num.

As money brought here, either for investment, or earned by New South Wales investments outside the Colony, shows in the imports, and, as on the other hand, the earnings of foreign investments in the Colony, and the expenditure of colonists living abroad, appear in the exports, it would seem that the gains and losses of the Colony from these sources practically balance one another. If such be the case it is evident that a stoppage of the flow of loan money to the Colony must be attended by an excess of exports, as was experienced during some of the years of the series shown in the foregoing table.

PUBLIC WEALTH.

Valuation of public and private wealth.

At the beginning of the year 1889 the estimated value of the public and private wealth of the Colony was £589,000,000, or about £542 per head of population. The public and municipal estate is valued at £178,500,000, or about £164 per head, while the personal and private wealth of the Colony amounts to £410,500,000, or £378 per head. The public wealth of New South Wales consists of railways, telegraphs, public works, unsold lands, the latter mostly leased to pastoralists, and yielding revenue in the shape of rent. The value of each class was—

	£
Railways, tramways, telegraphs, and other revenue yielding works	45,500,000
Public works and buildings, not yielding revenue, or only indirectly	18,300,000
Unsold Crown lands, and balances due on lands sold conditionally	110,200,000
Total value of public property or estate	£174,000,000
Municipal Property—Roads, buildings, and other works constructed by Municipalities	4,500,000
Total public wealth	£178,500,000

Estimated value of public works.

The present value of the Government railways and tramways of the Colony has been taken at the moderate estimate of £41,000,000, the sum of £31,619,762 having already been expended on their construction at the close of 1888. The balance of the amount represents the value of Crown lands used for railway purposes, and not specially paid for, and the increased value of railway property during the thirty-three years which elapsed since the lines were first opened for traffic. The present value of public roads and bridges formed chiefly out of general revenue has been taken at £9,000,000, which is the estimate of the Engineer-in-Chief for Roads and Bridges. Harbour works, including wharves and dredging plant, are valued at £3,500,000, public buildings and other works £6,100,000, public telegraphs £700,000, water supply and sewerage £3,700,000, making the total value of all public works, whether constructed from loans or revenue, £64,000,000.

Estimated value of the public estate.

The value of the public estate appears in the estimate given above as £110,200,000. Of this sum £12,513,500 represents the amount due to the Crown by conditional purchasers, while the remainder, being a little less than £97,000,000, is the value of the unsold estate. The total area unalienated at the commencement of the year 1889 was 153,499,000 acres, and of this nearly 129,500,000 acres were leased at a rental of £757,000, the remaining portion of 24,000,000 acres represents some of the best land in the Colony, but also much that is comparatively worthless. The value set down for the unsold Crown lands is about 12s. 9d. per acre which is certainly by no means extravagant.

Estimated value of municipal works.

The value of municipal works is £4,500,000, this, with the sums already given, making the total value of public and municipal property about £178,500,000. Against the wealth, however, must be set the public debt of the Colony, amounting to £44,100,149, or 25·3 per cent. of the total, thus leaving a surplus of £130,000,000 on the public estate alone.

PRIVATE WEALTH.

Private property in the Colony is estimated at the value of £410,500,000, comprised as follows :—

Land, houses, and permanent improvements within Municipalities	£131,500,000
Land, houses, and permanent improvements outside Municipalities, including improvements to Crown lands	181,200,000
Live Stock	34,000,000
Personal property, including household furniture	25,500,000
Machinery and implements of trade	6,300,000
Coin and bullion	9,000,000
Merchandise	20,700,000
Shipping owned in the Colony	2,300,000
	£410,500,000

Large amount of private wealth.

The total given above is certainly very large, but may be roughly verified by taking the amount of money left by persons dying during the past five years. Thus the total sum value of property claimed under probate and letters of administration during this period was £22,621,703. The number of deaths during the same period was 71,945, so that the average value of the property left by each person dying was about £314. It is well known that property for probate purposes is not estimated at its full value, assuming the real value is 10 per cent. above the probate, the total wealth of the Colony, as estimated by this means, would be £375,000,000, and if to this the increment of the past few years be added the total will approach very close to the sum above given.

Lands and buildings within municipal boundaries.

The value of lands and buildings assessed for municipal purposes is £120,285,095, the annual value being £7,365,444, or 6·12 per cent. on the nominal capital value. It is well known, however, that the capital value of unimproved lands is generally greatly understated for municipal purposes, and the annual value per cent. of all property is, in reality, not so high as stated above. A fair estimate of the ratable value of property within municipal boundaries has been made and substituted in the preceding table, in lieu of the amount returned by the municipal authorities.

Land outside municipalities.

The area of land outside municipalities, which is in private hands, amounts to about 42,383,000 acres. On this area, the number of houses was, in 1888, about 100,000, valued at £12,000,000, while the value of the land itself was £106,000,000, being at the rate of about £2 10s. per acre. Much indeed of this land would hardly realize, in the open market, half the sum named; on the other hand, the greater portion is worth considerably more. The mineral lands are worth, at a moderate computation, £15,000,000. The permanent improvements effected in the purchased lands of the Colony and on the holdings of pastoral tenants have been valued by the Inspector of Stock at £64,344,000. For the purpose of this estimate, the value has been taken at £48,200,000, or 75 per cent. of Mr. Bruce's figures. The determination of an exact value for any of the items which comprise the estimate just given is, of course, impossible; but it is believed that the sums named fairly represent the value of the property against which they stand.

Personal property and furniture.

The value of personal property and furniture was assumed to be equal to one-half the value of the house property. The estimate may, perhaps, be considered too low when it is borne in mind that it is usual in England to estimate the value of furniture alone at half the value of the houses furnished.

Merchandise.

Merchandise represents the value of the goods and stocks of all kinds, whether in store or shops, or at the place of production, and averages in value half the imports and exports taken together.

The following is a summary of the total value as well as of the values per head of population:—

	Total. £	Value per head. £
Public wealth	178,500,000	164
Private wealth	410,500,000	378
Total wealth	589,000,000	542

Increase in value of estates of deceased persons.

The value of the estates of persons whose wills were proved in the Colony, or for which letters of administration were granted, has increased very rapidly; but, unfortunately, the records are not perfect prior to the year 1881.

Value of Property for which Probate or Letters of Administration were granted.

Year.	No. of Probates and administrations—will annexed.	Amount sworn to.	No. of Letters of Administration.	Amount sworn to.	Total No. of Estates.	Total Amount sworn to.
		£		£		£
1881	671	2,011,305	526	307,818	1,197	2,319,123
1882	810	3,586,554	589	581,528	1,399	4,168,082
1883	862	3,528,602	613	588,029	1,475	4,116,631
1884	933	3,642,709	648	605,543	1,581	4,248,252
1885	961	3,721,805	659	601,542	1,620	4,323,347
1886	1,026	4,726,918	706	768,628	1,732	5,495,546
1887	961	3,621,874	665	641,426	1,626	4,263,300
1888	998	3,652,963	667	638,295	1,665	4,291,258

Average value of estates.

Two things are plainly noticeable from this table, especially if it be viewed in connection with the subsequent one, viz.,—that the proportionate number of persons leaving property shows a general tendency to increase faster than the population, whilst the average value of estates is also increasing. As regards the latter, the figures are somewhat irregular owing to the occurrence at irregular intervals of the deaths of very wealthy men, which amongst so comparatively few deaths considerably affect the average.

Value of Property left by Persons Deceased.

Year.	Number of Wills proved or administrations granted.	Number of deaths.	Percentage of Persons who left property.	Average value of Estates left by persons with property.
				£
1866	426	7,361	5·08	1,487
1867	387	8,631	4·48	1,782
1868	437	7,225	6·05	1,412
1869	462	6,691	6·90	1,513
1870	428	6,558	6·53	1,451
1871	475	6,407	7·41	1,283
1872	522	7,468	6·99	1,280
1873	637	7,611	8·37	1,398
1874	685	8,652	7·92	1,776
1875	908	10,771	8·43	*
1876	926	11,193	8·27	*
1877	1,001	9,869	10·14	*
1878	1,087	10,763	10·10	*
1879	1,051	10,200	10·30	*
1880	1,173	11,231	10·44	*
1881	1,197	11,536	10·38	1,938
1882	1,399	12,816	10·92	2,979
1883	1,475	12,249	12·04	2,791
1884	1,581	14,220	12·94	2,687
1885	1,620	15,282	10·60	2,669
1886	1,732	14,587	11·87	3,173
1887	1,626	13,448	12·09	2,683
1888	1,665	14,408	11·56	2,577

* Cannot be accurately given, probate duties not in force.

Probates an index of wealth.

As already pointed out, the amount of property sworn to, for the purpose of obtaining letters of administration or probate is not an index to the total wealth of the community, except in those years when stamp duties were levied. On the 20th June, 1865, these duties were imposed, and remained in force until the end of 1874; they remained in abeyance until June 25th, 1880, when they were again imposed. Sufficient time has, however, elapsed between the date first mentioned and the close of 1888 to enable a comparative view to be taken of the progress of the Colony. During the five years, 1868 to 1872, there died 34,349 persons, and the property left by them amounted to £3,213,851, so that the average per head was only £94, and the total private wealth averaged £46,900,000. For the period 1883 to 1887 the number of deaths occurring was 69,786, and the property left by those

Extraordinary increase of wealth.

New South Wales and Victoria compared.

who died was valued at £22,447,076, giving an average of £322 per head, and making the total wealth for the whole population £306,800,000 for the five years named. The increase of wealth, as shown by the returns quoted, amounted to £259,900,000 during the fifteen years which elapsed from 1868–72 to 1883–87, a rate equivalent to 13·34 per cent. per annum, while the population advanced only at the rate of 4·40 per cent. Such progress in the accumulation of wealth is beyond all precedent, and is so extraordinary as to raise suspicion as to the correctness of the figures upon which the deduction is built. The figures, however, relating to the value of property left by persons who died may be taken as correct, and the somewhat similar progress experienced in Victoria would warrant the contention, that the conclusion as to the rate at which wealth has accumulated is also correct; nevertheless the figures are given with diffidence and should be used with caution. For purposes of comparison with the neighbouring colony, the period from 1868 to 1887 has been selected for both colonies. In regard to New South Wales, the defect which has already been adverted to mars the full value of the table; from 1875 to 1880 probate duties were not in force, and it is surmised that in some, at least, of the years belonging to this period the personal estates only of persons who died were valued for purposes of probate. However, this may be; the table will illustrate what is intended, viz., the vast growth of the wealth both of the community as a whole and of the individuals of which it is composed.

Years.	New South Wales.			Victoria.		
	Average Amount left by each person dying.	Average Number of persons living.	Approximate Total Wealth of Population.	Average Amount left by each person dying.	Average Number of persons living.	Approximate Total Wealth of Population.
	£		£	£		£
1868–72	94	499,250	46,900,000	97	721,400	70,000,000
1873–77	147	596,200	87,600,000	205	792,800	162,500,000
1878–82	220	742,600	163,400,000	223	861,700	192,200,000
1883–87	322	952,900	306,800,000	319	975,600	311,200,000

INCOME.

Total income.

The income of persons living or holding property in New South Wales was estimated in 1887 to be £54,275,000, or at the rate of £52 per head. The income is derived from the following sources:—

	£
Pastoral, agricultural, and mining (including wages)	17,850,000
Manufacturing (including wages)	5,776,000
Trade and shipping (including wages)	3,168,000
Other mechanical and labouring pursuits (including railway workmen, profits of employers, &c.)	8,409,000
Income from trade and capital not directly employed in foregoing pursuits	4,278,000
Civil service and Government	1,405,000
Professional incomes	2,760,000
Personal attendance, food distribution, and other pursuits not enumerated above (not including earnings of females)	2,018,000
Females earning wages	2,711,000
House rent and rent of land not employed in agriculture, pastoral, or mining pursuits	5,900,000
	£54,275,000

Productive pursuits.

The earnings derived from what are usually termed productive pursuits—agriculture, mining, grazing, and manufactures—amount to £23,626,000, or 43·5 per cent. of the total earnings of the community. The income of the wage-earners, excluding females and those not actually engaged in manual labour, amounts to £22,947,000, distributed approximately as follows:—

Income of Wage-earners.	£
Pastoral and farming	5,931,000
Mining	2,208,000
Manufacturing	4,232,000
Transportation, Railway employés, &c.	1,215,000
Personal attendance and food distribution	1,680,000
Mechanics and labourers	6,650,000
Maritime pursuits, &c.	693,000
Others	338,000
	£22,947,000

Average earnings of workers.

The number of male workers in the Colony when the above estimate was made was 337,000 and the female 68,380, so that the average income of all ranks—excluding non-workers—was £153 for each male and £39 for each female worker. In the absence of an income-tax, the figures as regards income must be

Income of various countries.

taken as approximative; but there is every reason to believe th approach very near the truth. Compared with the older countri the income stated in the foregoing table to be enjoyed by perso living in New South Wales will appear very considerable, but n more so than the high rate of wages and the natural wealth of t Colony would lead one to expect. The following table, extract from Mulhall's Dictionary of Statistics, gives the rate for t principal countries of Europe and for the United States a Canada:—

Income per Head of Population in Various Countries.

Country.	Total Income.	Income per head
	Million £	£
United Kingdom	1,247	35·0
England	1,048	41·0
Scotland	121	32·0
Ireland	78	16·0
France	965	25·7
Germany	850	18·7
Russia	848	9·9
Austria	602	16·3
Italy	345	12·0
Spain	218	13·8
Portugal	61	13·6
Belgium	120	22·1
Holland	104	26·0
Denmark	47	23·2
Sweden and Norway	104	16·2
Switzerland	44	16·0
Greece	23	11·8
United States	1,420	27·2
Canada	118	26·9
New South Wales	54	52·0

CURRENCY.

Coins of United Kingdom current.

The coins circulating in Australasia are those of the Unit Kingdom. Gold is the standard, the silver and copper curr are more properly tokens than coins. Gold coins are legal tende to any amount, silver for an amount not exceeding forty shillings, and bronze for one shilling. The standard weight and fineness o

Standard weight of coins.

each coin are given below. The least current weight of a sovereign is 122·5 Imperial grains, and of a half-sovereign 61·125 grains.

Coins in circulation.

Denomination of Coin.		Standard Weight.	Standard Fineness.
		Imperial grains.	
Gold	Sovereign	123·27447	Eleven-twelfths fine gold, one-twelfth alloy, or decimal fineness ·91666.
	Half-sovereign	61·63723	
Silver	Crown	436·36363	Thirty-seven-fortieths fine silver, three-fortieths alloy, or decimal fineness ·925.
	Double Florin	349·09090	
	Half-crown	218·18181	
	Florin	174·54545	
	Shilling	87·27272	
	Sixpence	43·63636	
	Threepence	21·81818	
Bronze	Penny	145·83333	Mixed metal, copper, tin, and zinc.
	Halfpenny	87·50000	

Weight of gold minted.

Gold coins are the only ones struck at the Sydney Mint, though silver and bronze of English coinage are also issued. The weight of gold sent for coinage from the first opening of the Mint on the 14th May, 1855, to the end of 1888, was 16,213,435 oz., valued at £61,235,675; of this quantity New South Wales produced only 7,182,295 oz., of the value of £27,391,821, the amount from each colony being—

Gold received for Coinage at the Sydney Mint.

Colony where gold was produced.	Weight.	Value.
	oz.	£
New South Wales	7,182,295	27,391,821
Queensland	5,212,784	18,574,656
New Zealand	2,116,708	8,362,445
Victoria	1,438,151	5,906,186
Tasmania	11,804	44,817
South Australia	49,697	180,289
Other countries	15,118	51,619
Old coin	186,878	723,842
Total	16,213,435	61,235,675

New South Wales and Queensland gold coined at Sydney.

The greater part of the gold won in New South Wales and Queensland, and also part of the produce of New Zealand and South Australia, comes to Sydney for coinage; but by far the larger portion of the gold of the colonies last-mentioned, as well as of the other colonies of the group, goes to Melbourne. The total value of gold raised in all Australia to the end of 1888 amounted to £322,771,190, about 19 per cent. of which passed through the Mint of this Colony. Out of the £61,235,676 worth of gold minted £58,424,000 was converted into coin, the value of sovereigns and half-sovereigns being—

Gold Coin issued by the Sydney Mint.

Year.	Sovereigns.	Half-sovereigns.	Total.
	£	£	£
1855 to 1877	39,248,500	1,963,500	41,212,000
1878	1,259,000	63,000	1,322,000
1879	1,366,000	47,000	1,413,000
1880	1,459,000	40,000	1,499,000
1881	1,360,000	31,000	1,391,000
1882	1,298,000	26,000	1,324,000
1883	1,108,000	110,000	1,218,000
1884	1,595,000	....	1,595,000
1885	1,486,000	....	1,486,000
1886	1,667,000	41,000	1,708,000
1887	2,002,000	67,000	2,069,000
1888	2,187,000	....	2,187,000
Total	56,035,500	2,388,500	58,424,000

Bronze and silver coin issued by Mint.

Bronze coin was first issued from the Mint in 1868, and silver coin in 1879. The respective value of each to the close of the year 1888 being:—Bronze, £31,000; silver, £338,800. The amount of each particular currency issued in each year is shown in the following table:—

Sydney Mint—Silver and Bronze coin issued.

Year.	Silver Coin.						Bronze Coin.
	Half-crowns.	Florins.	Shillings.	Six-pences.	Three-pences.	Total.	
	£	£	£	£	£	£	£
1868 to 1875	......	......	......	......	......	......	15,185
1876	......	......	......	......	......	......	1,045
1877	......	......	......	......	......	......	770
1878	......	......	......	......	......	......	735
1879	17,000	15,972	12,000	3,681	4,647	53,300	910
1880	11,300	6,428	11,900	2,219	3,153	35,000	545
1881	14,600	10,600	12,000	3,600	2,700	43,500	710
1882	12,100	11,300	13,800	1,300	4,000	42,500	1,950
1883	11,200	9,300	13,000	2,400	3,700	39,600	1,375
1884	15,000	11,800	11,300	4,300	3,800	46,200	1,765
1885	11,100	7,200	12,450	5,550	7,600	43,900	2,485
1886	2,600	200	5,500	1,450	7,650	17,400	1,095
1887	2,375	700	1,850	500	690	6,115	800
1888	1,425	900	3,250	3,100	2,610	11,285	1,630
Total... £	98,700*	74,400†	97,050	28,100	40,550	338,800	31,000

*Includes £400 in Crowns. † Includes £400 double florins.

Silver coin withdrawn.

The amount of silver coin withdrawn from circulation from 1873, when the Mint first received worn coin, until 1888, was of the nominal value of £111,925. The actual weight after smelting was 354,006 oz., and the corresponding weight of new coinage would be 406,997 oz. The loss while the coins were in circulation was therefore 52,991 oz., the average loss being 13·02 per cent.

Coin held by banks.

The amount of coin held by the banks, and in circulation, was larger during 1888 than in any previous year, though, as compared with the population, the total has not varied greatly for some years, as will be seen from the following table.

Coin in Circulation and in Banks, with Average per Head of Population at close of year.

Year.	Coin in Banks.	Average. per head.	Coin in private hands.	Average. per head.	Total in Banks and in private hands.	Average per head.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
1870	1,352,842	2 15 2	1,960,344	4 0 0	3,313,186	6 15 2
1871	2,413,144	4 15 0	2,004,036	3 18 10	4,417,180	8 13 10
1872	2,693,154	5 2 4	2,075,546	3 18 7	4,768,700	9 0 11
1873	1,970,075	3 12 5	2,191,794	4 0 6	4,161,869	7 12 11
1874	2,283,353	4 1 0	2,279,316	4 0 10	4,562,669	8 1 10
1875	2,525,698	4 6 5	2,179,326	3 14 7	4,705,024	8 1 0
1876	2,732,104	4 10 5	2,191,945	3 12 7	4,924,049	8 3 0
1877	2,435,126	3 17 5	2,394,750	3 16 2	4,829,876	7 13 7
1878	2,227,115	3 1 10	2,366,831	3 12 0	4,593,946	6 13 10
1879	3,102,345	4 9 10	2,417,377	3 10 0	5,519,722	7 19 10
1880	3,637,568	5 0 3	2,605,370	3 11 9	6,242,938	8 12 0
1881	2,885,890	3 16 0	3,104,397	4 1 7	5,990,287	7 17 7
1882	2,672,799	3 7 2	3,128,415	3 18 9	5,801,214	7 5 11
1883	2,861,980	3 12 7	2,989,137	3 11 7	5,851,117	7 4 2
1884	3,863,873	4 7 10	2,988,744	3 7 9	6,852,617	7 15 7
1885	4,069,840	4 7 5	3,250,082	3 9 9	7,319,922	7 17 2
1886	4,439,742	4 8 7	3,361,904	3 7 1	7,801,646	7 15 8
1887	5,108,996	4 18 0	3,745,980	3 11 10	8,854,976	8 9 10
1888	5,061,000	4 13 3	3,936,000	3 12 6	8,997,000	8 5 9

Stock of gold and silver.

Though the stock of gold and silver in private hands, as compared with the population, showed an increase during 1888 and the previous year, there is evidently a tendency to reduce the quantity of coin needed for the ordinary business of exchange. The spread of the banking system is generally attended with a diminution of

Amount of currency.

unt of coin required for the use of business, and the in the supply of coin per head points to the extension of facilities. The quantity of coin in the colony both in banks and in circulation amounts to about £8 5s. 9d. a larger sum than in any other country. The nearest is France with £8; if, however, a comparison be the quantity of currency, apart from bank reserves, but paper money, New South Wales is exceeded by France, and the Netherlands, and nearly approached by the tates. The following table shows the total amount of n and the average per inhabitant in some of the principal . The extraordinary variations in the requirements arise diverse modes of transacting business which obtain, and ty of some of the countries enumerated.

unt of Coin and Paper circulation of various countries.

Country.	Amount of Circulation.	Amount per inhabitant.		
	£	£	s.	d.
Republic	11,721,000	3	9	0
ngary	68,371,000	1	16	0
	54,509,000	6	2	0
	28,674,000	2	9	0
	10,349,000	2	6	0
	6,182,000	2	14	0
	5,157,000	2	9	0
	325,545,000	8	13	0
	131,972,000	2	18	0
ain and Ireland	148,038,000	4	4	0
	5,605,000	3	17	0
	209,310,000	0	16	0
	95,159,000	3	7	0
	45,153,000	1	5	0
	10,309,000	1	0	0
ds	22,290,000	5	7	0
	7,103,000	1	10	0
	107,097,000	1	1	0
	49,936,000	2	19	0
a	6,215,000	0	19	0
d	8,522,000	3	0	0
	14,103,000	0	19	0
tes	248,438,000	4	19	0
New South Wales	5,600,000	5	3	0

BANKING.

Capital and profits of banks.

The nominal capital of banks trading in New South Wale £13,392,084, but much of this capital is not exclusively use the Colony. It has been found impossible to determine the portion of the whole capital required for the business of Colony; the figures relating to capital in the ensuing tables, th fore, refer to the nominal capital paid up. The income deri by the banks during 1888 amounted to £1,595,835, or a average rate of nearly 12 per cent. per annum, the rates var from 6 to 25 per cent. The capital and profits of banks opera in this Colony during 1888 will be found below :—

Banks operating in New South Wales.	Capital paid up.	Rate per Annum of last Dividend.	Amou Rese Prof
	£	℔ cent.	
New South Wales	1,250,000	17½	92
Commercial	600,000	25	76
Australasia	1,600,000	12	81
Union of Australia	1,500,000	12	1,08
Australian Joint Stock	500,000	15	23
London Chartered of Australia	1,000,000	7	24
English, Scottish, and Australian Chartered	720,000	10	22
Commercial of Australia	1,000,000	15	65
City	280,000	12½	16
Mercantile of Sydney	300,000	9	11
Federal of Australia	400,000	9	10
Queensland National	745,950	12	34
New Zealand	975,393	7	5
National of Australasia	1,000,000	15	68
New Oriental	571,580	6	15
South Australia	800,000	6	12
North Queensland	149,161	......	
Totals	13,392,084	......	6,69

Magnitude of banking operations.

The magnitude of the operations of the banking institutio the Colony may be gathered from the subsequent tables. In year 1872 the total assets amounted to £13,094,187, while liabilities were £9,672,266, showing a surplus of £3,421, while in 1888 the assets had amounted to £44,971,057, and

Increase of resources of banks.

bilities to £33,035,061, the surplus being £11,935,996. During e seventeen years covered by the table the population of the olony was doubled, while the resources of the banks were creased three and a half times.

Assets and Liabilities of Banks.

Year.	Assets.	Liabilities.	Surplus Assets.
	£	£	£
1872	13,094,187	9,672,266	3,421,921
1873	14,263,574	10,956,813	3,306,761
1874	16,276,956	12,600,906	3,676,050
1875	18,318,311	14,499,398	3,818,913
1876	19,982,588	16,043,694	3,938,894
1877	21,631,694	17,464,564	4,167,130
1878	22,853,362	18,047,430	4,805,932
1879	23,734,837	18,568,426	5,100,411
1880	24,398,813	19,335,229	5,063,584
1881	26,481,987	21,426,126	5,055,861
1882	30,624,731	24,393,750	6,230,981
1883	32,580,005	25,828,248	6,751,757
1884	35,261,346	27,480,291	7,781,055
1885	37,815,576	29,845,622	7,969,954
1886	39,805,308	30,378,358	9,426,950
1887	42,268,720	31,831,499	10,437,221
1888	44,971,057	33,035,061	11,935,996

Assets compared with liabilities.

The total assets of all banks trading in Australasia at the close f 1888 amounted to £154,327,046, against which there were iabilities to the extent of £108,919,015, so that the surplus proided by the banks out of their own resources was £45,408,031. he Colony showing the largest figures is Victoria, after which omes New South Wales. As regards the last named Colony the mounts shown in the following table differ from those of the receding one, which were not the assets, &c., at the close of the year as now given, but the average of the whole year.

Assets and liabilities of Banks in Australasian Colonies for the last quarter of 1888.

Colony.	Assets.	Liabilities.	Excess of Assets.
	£	£	£
New South Wales	46,914,973	33,914,572	13,000,401
Victoria	53,111,387	39,749,590	13,361,797
Queensland	19,905,420	12,071,608	7,833,812
South Australia	10,757,663	6,651,262	4,106,401
New Zealand	18,039,929	11,988,755	6,051,174
Tasmania	3,859,233	3,613,777	245,456
West Australia	1,738,441	929,451	808,990
Total..................	154,327,046	108,919,015	45,408,031

Bank returns no gauge of stability.

The figures just given must be taken with qualifications since the returns for any individual colony do not indicate the stability or otherwise of the banks, as most institutions have branches in the adjoining colonies and in London, and a bank may show, as did the late Oriental Bank Corporation, a large surplus of assets over liabilities in New South Wales and yet be on the brink of insolvency by reason of its operations elsewhere.

Bank deposits.

The amount of money deposited in the various banks of the Colony since 1872 will be found below, a distinction between deposits bearing interest and at call being made from 1876. The most striking feature of the table is the rapid advance of interest bearing deposits, which, in 1888, had reached the large sum of £20,382,990.

verage Amount of Deposits with Banks of Issue.

Deposits not bearing Interest.	Deposits bearing Interest.	Total Deposits.
£	£	£
*	*	8,653,481
*	*	9,760,661
*	*	11,369,184
*	*	13,132,772
5,146,536	9,563,608	14,710,144
5,061,231	10,984,264	16,045,495
4,933,643	11,678,843	16,612,486
4,898,724	12,352,454	17,251,178
5,683,870	12,209,781	17,893,651
7,719,236	11,869,979	19,589,215
8,310,054	13,772,826	22,082,880
7,158,975	16,302,407	23,461,382
7,453,914	17,738,445	25,192,359
8,819,979	18,387,705	27,207,684
8,355,255	18,974,984	27,330,239
8,870,037	20,162,493	29,032,530
10,436,559	20,382,990	30,819,549

* Not distinguished.

Bank deposits of Australasia

were deposited during the last quarter of 1888
2,034 with the various banks trading in Australasia; of
amed, £68,311,285—not including deposits in Tasmania—
rest. The banks of Victoria hold £37,570,837 at 36·8
of the total deposits, those of New South Wales,

£31,917,311, or 31·3 per cent. The large business of the Victorian banks, as compared with those of New South Wales, in this and other respects, is probably due to the extensive interests which capitalists of that Colony have long held in the Southern and Western districts of New South Wales. The figures are for the last quarter and not the average of the year as shown in the previous table.

Total Deposits with Banks of Issue during last quarter of 1883.

Colony.	Deposits bearing Interest.	Deposits not bearing Interest.	Total Deposits
	£	£	£
New South Wales	21,360,684	10,556,627	31,917,311
Victoria	26,393,132	11,177,705	37,570,837
Queensland	7,974,037	3,227,152	11,201,189
South Australia........	4,318,642	1,838,261	6,156,903
New Zealand	7,776,227	3,261,386	11,037,613
Tasmania..........................	....	....	3,318,455
Western Australia	488,563	371,163	859,726
Total ....£	*68,311,285	*30,432,294	102,062,034

* Tasmania not included.

Reserves compared with liabilities.

The proportion of coin and bullion which banking institutions must habitually keep in stock is not fixed by any enactment. Compared with the total liabilities, and with deposits at call and note circulation, the quantity of coin has varied very considerably from year to year, as the following statement shows. The largest per centage was held in 1876, and the least in 1883 :—

arly Average Coin and Bullion in Banks, compared with Liabilities, and with deposits at call and circulation.

Year.	Per cent. of Liabilities to Reserves.	Per cent. of deposit at call and note circulation.
1876	18·2	46·5
1877	15·3	42·9
1878	13·0	38·2
1879	13·8	42·4
1880	17·8	49·9
1881	17·1	40·1
1882	12·7	31·0
1883	11·1	32·3
1884	13·2	39·5
1885	14·2	40·0
1886	13·2	40·1
1887	15·5	47·2
1888	16·7	45·6

Average value of coin reserved.

The quantity of coin in the colony at the close of 1888 has ready been stated as £8,997,000, or £8 5s. 9d. per head. Of this ount £5,061,000 was in the hands of the banks, and £3,936,000 circulation. The average value of coin and bullion during the ar named was rather more than that at the end of the year. e following figures are for the period which has elapsed since 1871.

Average value of Coin and Bullion in Banks of Issue.

Year.	Coin.	Bullion.	Total.
	£	£	£
1871	1,867,278	184,553	2,051,831
1872	2,859,325	126,201	2,985,526
1873	1,972,092	76,483	2,048,575
1874	2,322,269	192,254	2,514,523
1875	2,476,456	112,319	2,588,775
1876	2,828,503	87,063	2,915,566
1877	2,586,053	84,415	2,670,468
1878	2,262,526	86,194	2,348,720
1879	2,488,175	83,824	2,571,999
1880	3,373,618	73,651	3,447,269
1881	3,594,914	80,068	3,674,982
1882	3,022,159	74,308	3,096,467
1883	2,798,536	80,018	2,878,554
1884	3,559,859	61,223	3,621,082
1885	4,171,043	62,066	4,233,109
1886	3,958,238	66,243	4,024,481
1887	4,870,315	65,187	4,935,502
1888	5,461,393	59,608	5,521,001

Reserves comparatively heavy.

Compared with the total amount of currency, the reserves held by Australasian Banks are proportionately heavier than in any other country. In New South Wales the bank reserve equals the whole of the active circulation both of coin and paper; much the same conditions exist in the neighbouring colonies. The only European country approaching this proportion, is the Netherlands, where the bank reserves equal about one half the active currency of the country. The following statement shows the quantity of coin in Banking Institutions and the Public Treasury as well as the total value of the currency, both active and reserved, of some of the leading countries of the world.

Amount of Coin in Banks and total Currency of all kinds in Principal Countries:—

Countries.	Coin in Banks and Treasury.	Total amount of currency.
	£	£
Australasia—		
New South Wales	5,521,000	11,121,000
Victoria	6,838,719	....
South Australia	1,267,037	....
Queensland	1,856,522	....
Tasmania	819,645	....
New Zealand	2,342,052	....
Argentine Republic	2,910,274	14,631,000
Austro-Hungary	20,116,937	88,487,000
Belgium	3,688,247	38,196,000
Brazil	....	28,673,000
Canada and Newfoundland	1,867,785	12,217,000
Chili	491,590	6,673,000
Denmark	2,884,350	8,041,000
France	82,602,649	408,147,000
Germany	37,249,868	169,221,000
Great Britain and Ireland	31,607,451	179,645,000
Greece	369,000	5,974,000
India (British)	16,063,390	225,373,000
Italy	14,218,258	109,377,000
Japan	5,839,829	50,992,000
Mexico	361,416	10,669,000
Netherlands	11,298,393	33,588,000
Portugal	2,402,369	9,505,000
Russia	25,421,671	132,518,000
Spain	5,580,911	55,516,000
Scandinavia	2,611,899	8,826,000
Switzerland	2,379,972	10,902,000
Turkey	2,976,600	17,079,000
United States of America	109,476,780	357,914,000

Advances made by Banks.

The advances which the various banks of issue have made to their stomers averaged in 1871, £7,593,538, representing £14 19s. r head of the whole population; during 1888 the total had ached £35,870,485, equal to £33 14s. per head; which, whether ewed in connection with banking business outside Australia, or illustrating the progress of the Colony, cannot but be regarded extraordinary.

Amounts Advanced by the Banks to their Customers—Yearly Average.

Year.	Amount of Advances.	Advances per head of Population.
	£	£ s.
1871	7,593,538	14 19
1872	7,993,223	15 4
1873	9,116,831	16 15
1874	10,074,712	17 17
1875	11,770,185	20 3
1876	12,801,716	21 4
1877	15,354,507	24 8
1878	16,762,111	25 10
1879	17,098,052	24 15
1880	16,661,815	22 19
1881	19,038,386	25 1
1882	23,517,046	29 12
1883	25,894,669	31 1
1884	27,479,142	31 4
1885	30,556,628	32 16
1886	32,527,431	33 4
1887	33.352,172	32 12
1888	35,870,485	33 14

Note circulation of Banks.

Banks trading in the Colony are allowed a note circulation ual to the amount of their paid-up capital and the coin d bullion in store. The Banks have in no instance availed emselves to the full extent of their privilege in this regard; deed, if they were so disposed, such an issue of notes would be possible, as the currency required for the business of the Colony scarcely more than the value of gold retained in the vaults of e Banks. It will be seen from the following statement that the ue of paper by the Banks has been stationary for about seven ars.

Notes and Bills in Circulation not bearing interest, Yearly Average.

Year.	Notes in Circulation.	Bills in Circulation.	Total.
	£	£	£
1871	694,344	42,816	737,160
1872	789,544	42,916	832,460
1873	920,620	32,067	952,687
1874	1,005,639	34,289	1,039,928
1875	1,080,088	34,811	1,114,899
1876	1,093,862	33,712	1,127,574
1877	1,129,279	37,618	1,166,897
1878	1,167,519	38,621	1,206,140
1879	1,123,123	41,703	1,164,826
1880	1,173,663	45,229	1,218,892
1881	1,390,376	52,687	1,443,063
1882	1,614,191	57,487	1,671,678
1883	1,677,146	64,596	1,741,742
1884	1,644,469	60,443	1,704,912
1885	1,714,095	55,300	1,769,395
1886	1,621,090	60,827	1,681,917
1887	1,526,096	64,146	1,590,242
1888	1,591,500	84,111	1,675,611

Enormous development of banking.

Considering the population of these colonies the banking operations of Australasia have attained enormous development. The following table from Mulhall's Dictionary shows the capital employed in banking, and the amount of deposits in some of the principal countries. The figures regarding Australasia are brought down to the latest date.

ital and Deposits in the Banks of Various Countries.

Country.	Million £.			Amount per Inhabitant.
	Capital.	Deposits.	Total.	
				£
Kingdom	270	570	840	25
	55	150	205	6
	85	200	285	6
	45	110	155	2
	36	130	166	5
	31	60	91	3
d Portugal	12	10	22	1
	7	20	27	5
	6	20	26	7
via	11	24	35	4
	558	1,294	1,852	
States	145	386	531	10
	17	18	35	8
sia	45	102	147	40

general business transacted by the banks of each Colony is ized below. The reserve of coin consists almost wholly of rdly more than 3 per cent. being in silver. The stock of coin z., £16,991,924, was equal to about 68 per cent. of the of the Bank of England at the same date. The total assets ed to £154,327,046, and the liabilities £108,919,016, so proportion provided by the banks out of their own resources 5,408,030.

Assets and liabilities of Australasian Banks.

Colony.	Liabilities.					Assets.						
	Notes in Circulation.	Bills in Circulation.	Balance due to other Banks.	Deposits.	Total Liabilities.	Coin.	Bullion.	Landed Property.	Notes and Bills.	Balances due from other Banks.	Notes and Bills discounted and all other Debts due to the Banks.	Total Assets.
	£	£	£	£	£	£	£	£	£	£	£	£
New South Wales..	1,634,255	99,681	263,326	31,917,311	33,914,573	5,293,213	59,141	1,333,801	303,857	2,094,480	37,830,481	46,914,973
Victoria	1,728,033	121,637	329,083	37,570,837	39,749,590	5,260,915	343,181	1,581,854	270,648	329,230	45,325,559	53,111,387
Queensland	740,919	25,716	103,784	11,201,189	12,071,608	1,856,521	244,343	644,526	17,473	198,759	16,943,798	19,905,420
South Australia ..	431,448	10,597	52,314	6,156,903	6,651,262	1,464,155	6,547	423,677	38,527	256,307	8,568,450	10,757,663
Western Australia.	54,804	5,171	9,749	859,726	929,451	291,886	714	81,075	2,644	6,208	1,355,914	1,738,441
Tasmania	152,321	54,614	88,387	3,318,455	3,613,777	*612,876	......	100,262	......	74,539	3,062,556	3,850,233
New Zealand......	595,512	50,428	35,202	11,307,613	11,988,755	2,212,358	97,170	543,197	33,279	101,386	15,052,539	18,039,929

Rates of Interest.

'he rate of interest allowed by banks of issue at the beginning the year 1888 was 2 per cent. for deposits fixed for three nths, 3 per cent. for six months, and 4 per cent. for twelve nths. The interest rates remained at these figures till the 23rd ober, when they were raised to 3, 4, and 5 per cent. The ings and Post Office Banks gave interest at the rate of 4 per ., the Savings Banks giving a point higher on all accounts aining open to the end of the year. Interest was allowed by Building and Investment Societies not issuing notes at the of 5, 6, and 7 per cent. for the periods named above. The mpanying table gives the average interest per annum allowed banks during each year since 1872.

verage Interest per annum on Money deposited with Banks.

Year.	3 Months.	6 Months.	12 Months.
	per cent.	per cent.	per cent.
1872	2½	3½	4
1873	2½	3	3½
1874	3	3½	4
1875	3½	4½	5¼
1876	3	4	5
1877	3	4	5
1878	3½	4½	5½
1879	4	5	6¼
1880	3	4	5
1881	2	2¾	3¾
1882	2	3	4
1883	4	5	6
1884	3½	4½	5½
1885	3	4	5
1886	3½	4½	5½
1887	3½	4½	5½
1888	2½	3½	4½

Rates of Discount.

he following table gives the discount charged by the banks unexceptional bills. The table covers a period of seventeen s, during which the rates varied from 5½ to 7 per cent. for under three months, from 6¼ to 8 per cent. for four months, from 7½ to 9 per cent. for bills with a currency over four ths. In the last column of the statement the discount rates he Bank of England during the same period are given :—

Average Discount Rates per annum in Local Banks.

Year.	Discount on Local Bills.			Bank of Engl Rate.
	Under 3 Months.	3 to 4 Months.	Over 4 Months.	
	Per cent.	Per cent.	Per cent.	Per cent
1872	5½	6½	7½	4½
1873	5½	6½	7½	5
1874	7	8	9	3⅗
1875	7	8	9	3⅕
1876	7	8	9	3½
1877	7	8	9	3⅜
1878	7	8	9	3⅛
1879	7	8	9	2$\frac{3}{10}$
1880	7	8	9	2$\frac{1}{10}$
1881	6	7	8	3½
1882	6	7	8	4¼
1883	7	8	9	3½
1884	6½	7½	8½	3⅞
1885	6	7	8	3
1886	6½	7½	8½	3⅞
1887	6½	7½	8½	3¼
1888	6½	7½	8½	3½

Large sums deposited in Banks.

In the next table is given the amount of deposits during e year, from 1871 to 1888, in the Chartered banks and the Gove ment Savings and Post Office banks. The increase has b singularly rapid, not only absolutely, but also as compared w the increase in population. During the seventeen years deposits increased from £7,989,801 to £35,954,986, the rate head advancing from £15 8s. 7d. to £33 2s. 4d. The whole the deposit banks of the Colony are not included in this table; a very considerable sum is received by building and other societies, which offer a larger interest than either the ordinary banks or the Government institutions. During 1888 the amount of money entrusted to these societies, as far as the returns show, was £2,442,065, so that the total amount of deposits in banks of all descriptions was £38,397,051, equivalent to £35 8s. per inhabitant. The figures in the ensuing table do not include sums in building and investment societies.

Total deposits in Banks, &c.

Money on Deposit in Banks in New South Wales.

Year.	Banks.	Savings Banks.	Post Office Banks.	Total.	Amount per head of Population.
	£	£	£	£	£ s. d.
1871	7,043,886	931,688	14,227	7,989,801	15 8 7
1872	9,273,087	1,028,738	80,688	10,382,513	19 7 11
1873	10,279,324	1,164,561	206,070	11,649,955	21 0 9
1874	11,884,958	1,275,902	303,113	13,463,973	23 8 5
1875	13,650,892	1,295,797	354,075	15,300,764	25 14 11
1876	14,859,505	1,303,813	400,120	16,563,438	26 19 5
1877	16,325,043	1,355,258	467,453	18,147,754	28 3 10
1878	16,722,453	1,333,017	480,025	18,535,495	27 11 9
1879	17,862,840	1,410,905	511,357	19,784,102	27 17 9
1880	17,883,024	1,489,360	586,496	19,958,880	26 18 1
1881	20,308,017	1,427,202	971,501	22,706,720	29 3 2
1882	22,544,549	1,856,641	1,158,454	25,559,644	31 10 6
1883	23,739,134	1,822,319	1,183,519	26,744,972	31 3 8
1884	26,250,420	1,887,349	1,290,931	29,428,700	32 11 1
1885	26,709,386	2,016,656	1,471,894	30,197,936	31 10 6
1886	28,428,253	2,081,498	1,423,305	31,933,056	31 17 5
1887	29,253,864	2,174,439	1,501,454	32,929,756	31 11 6
1888	31,917,311	2,299,971	1,737,704	35,954,986	33 2 4

ffect of epression n deposits.

The year 1888 was a very trying one in the Colony, which suffered greatly from want of rain and consequent failure of crops. Notwithstanding this there has been an increase in the people's banks, of depositors to the number of 9,422, and in deposits to the extent of £361,782; part of this increase shown is due to interest earned during the year, and part to the extension of the Post Office system, but when full allowance is made on these accounts the increase will be found to be proportionately greater than that of the population. The number of depositors at the close of the last two years and the amount to their credit was :—

People's Savings Banks.	1887.		1888.	
	Depositors.	Amount.	Depositors.	Amount.
		£		£
Savings Banks	54,873	2,174,439	57,032	2,299,971
Post Office Banks ...	64,002	1,501,454	71,265	1,737,704
Total	118,875	3,675,893	128,297	4,037,675

and and Build- ng Societies.

Besides the chartered banks and those under Government guarantee, as already mentioned, there are banking, land, building and investment companies, who receive money on deposit. Statistics are now obtained of the operations of some of these Companies, and it would appear that they have assets to the extent of £5,064,583 against liabilities of £3,710,558, showing a nominal surplus of £1,354,025. Their subscribed capital amounts to £1,151,036 and reserved capital £524,682—in all £1,675,718. The most notable points about these Companies are the large dividends paid, from 6 to 25 per cent., and the large sum for which land figures is their assets. It will appear from the accompanying statement that these Companies hold land to the extent of

2,782,750, their other assets, part of which represents lands sold, t not paid for, amounting to £2,281,833.

Liabilities and Assets of Land and Investment Companies.

Liabilities.		Assets.	
Deposits at call ...	£52,162	Land	£2,782,750
Deposits at interest	£2,389,903	Other assets	2,281,833
Total deposits......	£2,442,065	Total...	£5,064,583
Other liabilities ...	1,268,493		
	£3,710,558	Excess of assets	£1,354,025

*It is believed that Societies not making returns have deposits to the amount of nearly one million sterling.

Effect of depression on insolvency.

The prevailing depression elsewhere alluded to found expression in the unusually large number of insolvencies which occurred during 1887, as shown in a following table. The nominal deficiency shown by insolvents' schedules was not greater than in some previous years; but the estimate of liabilities and assets, particularly the latter, are to be accepted with caution. In addition to the estates of which the Insolvency Court took cognisance of, there were private assignments during the year to the amount of £900,000 estimated liabilities.

Private assignments.

Effect of the new Act.

In 1888 there was a very marked improvement, the amount of liabilities as shown in the insolvents' schedules, being lower than in any year since 1883, and the deficiency in the insolvents' estates being about 32 per cent. less than in 1887. It is surmised that many persons fearing the stringency of the new Bankruptcy measure, which was then before Parliament, sequestrated their estates before the provisions of the new Act came into force, so that the falling off in the number of insolvents in 1888 is due more to the excessive number of persons who assigned their estates in the previous year, than to a decided improvement in trade.

Number of Insolvencies in New South Wales, and Amount of Liabilities, Assets, &c.

Year.	Number of Insolvents.			Amount of Liabilities as shown in the insolvents' schedules.	Amount of Assets, as shown in the insolvents' schedules.	Amount of Deficiency shown in the insolvents' estates.
	Voluntary.	Compulsory.	Total.			
				£	£	£
1876	461	41	502	492,847	169,604	323,243
1877	534	54	588	508,352	210,821	297,531
1878	652	64	716	664,736	350,176	314,560
1879	767	96	863	781,334	306,103	475,231
1880	784	50	834	479,864	292,233	187,631
1881	664	60	724	379,290	218,212	161,078
1882	686	48	734	307,084	167,876	139,208
1883	720	65	785	444,594	245,836	198,758
1884	856	62	918	836,165	580,195	255,970
1885	849	80	929	773,212	589,359	183,853
1886	1,116	105	1,221	989,262	733,127	256,135
1887	1,249	102	1,351	1,081,726	788,941	292,785
1888	735	116	851	659,307	459,677	199,630

Money secured by lien on wool.

The amount of money advanced on the security of the wool clip and the live stock of the Colony is always very large. Such advances do not necessarily mean a scarcity of money on the part of the borrowers, as the system of liens and mortgages is part of the ordinary method of carrying on the trade of the country. Advances were, however, made more largely during the years of depression which extended over the period from 1878 to 1882, as will be seen below.

Preferable Liens on Wool and Mortgages on Live Stock, registered in New South Wales.

Year.	Preferable Liens on Wool.			Mortgages on Live Stock.				
	No. of Liens.	No. of Sheep.	Amount of Liens.	No. of Mortgages.	No. of Sheep.	No. of Horned Cattle.	No. of Horses.	Amount lent.
			£					£
1876	920	4,828,951	752,819	758	2,480,004	258,447	5,847	2,157,835
1877	994	4,386,378	627,779	1,994	2,565,962	185,796	6,726	2,004,363
1878	1,027	4,611,696	714,273	914	2,647,183	183,210	8,412	2,059,348
1879	1,246	6,602,742	1,005,118	925	3,538,161	128,685	9,564	2,268,850
1880	1,479	6,216,741	981,172	901	4,858,265	183,555	401	2,818,967
1881	1,609	5,709,061	904,012	1,275	5,982,994	215,564	9,646	4,623,915
1882	1,289	4,837,667	801,175	1,074	3,865,331	112,441	8,391	3,391,984
1883	1,301	6,349,801	1,026,574	1,077	3,601,890	131,068	7,389	2,486,407
1884	1,379	4,168,185	973,179	1,471	2,696,994	77,241	8,097	1,881,082
1885	1,236	5,263,407	1,327,214	1,431	4,730,233	117 241	10,764	2,962,471
1886	1,187	9,049,194	1,454,154	1,363	4,323,553	79,616	10,349	,404,813
1887	1,285	9,296,975	1,685,655	1,563	3,954,286	79,312	11,464	2,054,785
1888	1,174	9,800,520	1,282,125	1,998	4,002,148	80,120	12,364	2,003,216

When any sum has been secured, both by a lien on the wool and by a mortgage of the sheep, the amount is included under the head of mortgages only.

Discharges of advances.

The above table does not, however, give an exact statement of the case, as a large portion of the advances made were discharged, as will be seen in the following table :—

Discharges of Mortgages on Live Stock registered.

Year.	Number.	Amount.	Year.	Number.	Amount.
		£			£
1876	190	1,028,079	1883	126	600,426
1877	225	1,292,703	1884	306	3,801,352
1878	159	1,037,119	1885	208	1,173,673
1879	161	1,247,708	1886	150	849,742
1880	232	3,804,475	1887	210	1,073,674
1881	399	2,781,122	1888	240	1,160,307
1882	258	1,900,443			

Advances in growing crops.

Other advances on produce are also made, the principal being those on growing crops. Such advances do not ordinarily reach large sums either individually or in their total. The year 1888 differed in this respect from previous seasons, for, owing to the drought, farmers were compelled to obtain much heavier advances on such crops as survived the severity of the season than was usually their practice. The amount of advances made on crops for thirteen years was—

Liens on Growing Crops registered.

Year.	Number.	Amount.	Year.	Number.	Amount.
		£			£
1876	319	16,419	1883	814	50,789
1877	477	27,086	1884	888	54,057
1878	539	43,186	1885	857	71,153
1879	778	55,869	1886	989	70,212
1880	797	81,626	1887	949	67,379
1881	897	42,255	1888	1006	247,466
1882	854	40,379			

Mortgages registered.

The transactions in regard to mortgages of land have increased very rapidly during the past nine years: the maximum was reached in 1885, when the amount of such transactions was not less than £11,360,108. Besides there were many mortgages not registered. The great increase shown in 1885 over any previous year is due to mortgages of country lands, on which a sum of £7,990,086 was advanced, an amount not only larger than that lent on country lands before or since, but larger than the whole sum advanced on mortgage on land throughout the Colony in any one year. The total amount of mortgages on land for 1888 was £8,765,109, a sum which, though large, is much lower than that registered in 1885.

Mortgages on Land registered.

Year.	No. of Mortgages.	Amount.	Year.	No. of Mortgages.	Amount.
		£			£
1876	2,126	1,402,848	1883	4,088	5,859,472
1877	1,758	1,308,775	1884	4,653	5,620,421
1878	2,440	1,981,481	1885	7,618	11,360,108
1879	2,809	2,461,964	1886	6,933	7,570,210
1880	2,995	4,048,952	1887	6,108	5,869,302
1881	4,505	5,268,449	1888	7,452	8,765,109
1882	4,159	4,924,596			

The amount of mortgages paid off has been uniformly less than of mortgages registered, as will be seen from the following figures:—

Mortgages discharged.

Mortgages on Land discharged.

Year.	Number.	Amount.
		£
1876	1,101	600,835
1877	1,902	1,123,139
1878	1,350	896,445
1879	1,235	868,524
1880	1,860	715,148
1881	2,386	1,926,357
1882	2,051	1,676,224
1883	1,388	1,433,912
1884	2,216	1,957,765
1885	3,473	2,239,075
1886	2,773	2,515,398
1887	3,067	2,909,931
1888	4,160	4,273,034

The total amount of liens on wool registered during the thirteen years from 1876 to 1888, as shown in the above tables, was £13,535,249; the mortgages on live stock amounted to £33,118,036, and on land, £66,441,687, in all, £113,094,972. During the same period the mortgages discharged were: liens on wool to the full amount in due course, mortgages on live stock, £21,750,823, and on land, £23,135,787, making a gross total of £58,421,861. The sums of money advanced on mortgages of various kinds over that paid off was therefore apparently £54,673,111 in thirteen years. As regards the liens, such indebtedness does not exist, for the mortgages over stock and clip are for the most part terminated without being formally discharged. Even in the case of mortgages on real estate the amount outstanding does not represent money actually owing; in very many cases it simply represents the limits within which clients of banks and other loan institutions are entitled to draw, though many of these clients may be in credit while their property is mortgaged and unreleased. Making these allowances, the probable amount of private indebtedness on account of money advanced on mortgages of various kinds is about £30,000,000. The larger portion of this sum represents the engagements incurred

Amount of private indebtedness.

by pastoral tenants for the improvement or security of their estates, while a considerable part is due to the purchase of lands in the vicinity of Sydney on credit with payments in redemption extending over a number of years. The weight of this burthen of mortgage will have to be largely reduced before that elasticity will again be found in trade which was visible a few years ago.

Postal business money orders.

The business transacted by the Postal Department in money orders has grown to very large dimensions, for while in 1876 there were issued 18 orders to every hundred persons in the community, in 1888 the number reached 35, the total value advancing from £465,771 to £1,215,132, while the value of orders paid rose from £421,162 to £1,116,433 during the same period. This increase is due mainly to the greater facilities now afforded for the transmission of money by this method, though it is also to some extent attributable to the more general appreciation of the money order system amongst the working classes of the community. The following is a statement of the business transacted since 1876:—

Money Orders issued and paid, and Commission received.

Year.	Issued.		Paid.		Commission.
	Number.	Amount.	Number.	Amount.	
		£		£	£
1876	112,684	465,771	101,492	421,162	4,663
1877	129,120	494,469	120,493	450,477	5,248
1878	142,025	538,800	129,143	487,458	5,772
1879	159,897	582,423	142,201	515,076	6,488
1880	190,606	669,022	168,944	583,340	7,684
1881	220,670	771,978	195,757	675,025	8,799
1882	247,716	883,524	218,334	771,861	10,027
1883	275,592	963,698	229,595	829,770	11,371
1884	305,883	1,068,068	270,678	921,904	12,651
1885	337,856	1,169,569	298,082	997,961	14,243
1886	345,825	1,134,955	309,576	982,336	14,927
1887	360,759	1,131,884	330,594	1,010,297	14,960
1888	388,416	1,215,132	368,081	1,116,433	15,807

Fire risks.

The extent of fire risks held by the Insurance Companies transacting business in the Colony can only be given for the places wherein fire brigades have been established under the proisions of the Fire Brigades Act of 1884. The amount of such isks declared by the various companies, but not including reinsurance, was—

	£	£
Sydney and Suburbs		53,583,000
Country—		
Bathurst	793,952	
Glen Innes	165,430	
Grafton	298,687	
Hay	143,027	
Lambton	33,565	
Parkes	66,240	
		1,500,901
Total		£55,083,901

The declared amount of risks held in Sydney during the past five years was—

	£
1884	36,691,000
1885	41,631,582
1886	46,253,370
1887	49,209,395
1888	53,583,000

Increase of risks to population.

The gross increase for the period of four years shown was £16,892,000 or 46 per cent. During the same period the population of the metropolitan district increased about 26·8 per cent., from which it would appear that the wealth of Sydney is advancing at a rate much more rapid than the population, though the increase of the later is abnormally large. Some part of the increase shown may be due to an extension of the facilities offered to insurers, but the amount due to such cause will not be very large.

Fires in metropolis.

The number of fires which occurred in the Metropolitan district during the year was 266, which may be classified as follows, according to the damage done:—

Slight damage	222
Serious damage	19
Total destruction	25
Total	266

Besides these there were 61 chimney fires and 35 false alarms.

Of the premises totally destroyed by fire 17 were insured and 5 not insured, while in 3 cases it was not ascertained whether the properties were insured. Of the other serious fires the damage was covered in 18 cases, but in one case was not insured. The information regarding insurance was not obtained in all instances where the loss was slight, but of the property reported to be damaged slightly the loss was insured in 131 cases, but not in 25. So that it would appear the total number of insurances was 166 as against 31 non-insurances, or 84·3 per cent. of the whole number for which the information is available. The percentage just given must be taken with qualification, for as the premises and the property therein contained frequently belong to different persons, so in order to gauge the extent to which insurance is practised, it would require to be ascertained in how many instances the double insurance was effected, for in the returns above given a property is considered insured if the premises be covered and the contents uninsured, the converse also being the case.

Firemen in metropolitan district.

The total number of firemen attached to the brigades in the metropolitan and country districts was as follows, the number of fires attended being also given :—

Name of Station.	Number of fires attended.	Average number of men in the brigades.
City Companies—		
Metropolitan Fire Brigades (3 stations)...	266	29
North City	32	15
Paddington Brewery	60	....
Theatre Royal.................................. ...	9	....
Standard Brewery	81	20
Suburban Companies—		
Alexandria	34	19
Ashfield	2	20
Balmain (2 stations)	7	34
Burwood	3	17
Darlington	47	....
Glebe..................................	21	17
Leichhardt	19	....
Manly	3	16
Newtown	22	....
Paddington	12	16
Parramatta No. 1	6	21

Name of Station.	Number of fires attended.	Average number of men in the brigades.
n Companies—*continued.*		
matta No. 2	6	25
rn	23	21
onards	9	24
rloo	20	20
rley	7	20
lahra	10	19
Companies—		
y Volunteer Fire Brigade	2	24
n Hill Volunteer Fire Brigade	21	16
rst Fire Stations	8	24
Innes Fire Brigade	....	17
urn Volunteer Fire Brigade	7	23
on Volunteer Fire Brigade	5	24
Grafton Volunteer Fire Brigade	3	23
Fire Brigade	5	12
ton Fire Brigade	3	26
s Fire Brigade	2	15
Total	755	557

LIFE ASSURANCE.

Law relating to Assurance.

law does not provide for the publishing of sworn returns by ssurance Companies, and although valuable and interesting are made annually by some companies, it has been found mpossible to distinguish the progress of assurance in New Wales, as distinct from the other Colonies. Most of the ies have extended their business beyond the Colony in their Chief Office is established; the following figures therefer to Australasia generally, though only to those offices head-quarters are in the Colonies. The accumulated funds ve societies amount to £12,530,500, of which £6,927,792 ested in mortgage, £2,126,956 in loans on policies and l security, £1,262,731 in Government securities, £124,846 res, £1,546,393 in freehold land and cash, principally at leposit, £850,622. The interest earned during the year ted to £700,477, being at the rate of 6·91 per cent.; the ncrease in the accumulated funds was £1,377,478. The ing table shows the assets of the Companies reporting in 1888.

Assets of Australian Life Assurance Companies reporting in 1888.

Companies.	Mortgages.	Loans on Policies and Personal Securities.	Government Securities and Debentures.	Shares.	Cash on Deposit, in hand, and on current account.	Freehold and Leasehold Property.	Sundry Debts.	Total.
	£	£	£	£	£	£	£	£
Australian Mutual Provident	4,630,507	1,482,807	417,204	......	442,452	456,569	140,283	7,569,822
Victoria Life and General (including all branches)	307,892	2,929	30,137	5,821	69,509	17,329	7,285	440,902
Australian Alliance (including all branches)	179,933	47,063	2,035	85,615	114,862	23,422	62,252	515,182
Adelaide Life (including Guarantee Branch)	43,873	1,653	....	......	5,353	10,739	1,253	62,871
Mutual Life of Australasia	316,601	80,800	23,092	......	1,436	157,627	8,496	618,052
National Mutual Life	319,956	107,799	13,991	30,792	92,436	155,177	82,120	802,271
Mutual Assurance of Victoria	174,124	66,297	....	......	38,960	169,641	15,260	464,282
New Zealand Government Life Assurance Department	266,498	185,387	763,522	......	15,174	90,036	44,224	1,364,841
Australasian Widows' Fund (Mutual)	398,589	47,647	....	......	18,752	103,888	30,628	599,504
Colonial Mutual Life	236,169	90,954	12,750	2,618	38,980	300,614	61,194	743,279
Australian Temperance and General (Mutual)	12,980	10,697	....	......	12,307	61,351	3,316	100,651
South Australian Mutual	10,670	2,923	....	......	401	....	2,632	16,626
Total	6,927,792	2,126,956	1,262,731	124,846	850,622	1,546,393	458,943	13,298,283

FINANCIAL POSITION OF AUSTRALASIA.

A century of progress.

The first century of Australasian history closed on the 26th January, 1888. It is impossible to trace step by step the progress made during that period, as the data for this purpose are for the most part wanting. Sufficient material is, however, available, from which a comparative statement of the wealth of the colonies at different periods may be deduced. In the following figures the private wealth of the people has alone been considered, the value of the unsold lands of the State, as well as the value of public works, having been omitted. The subjoined table shows the wealth of the whole of Australasia and of New South Wales, and the increase thereof at intervals of twenty-five years from the date when this territory was first colonized.

Wealth of the colonies at various periods.

January.	Australasia.		New South Wales.	
	Amount of Wealth.	Increase during 25 years.	Amount of Wealth.	Increase during 25 years.
	£	£	£	£
1788	—	Country first	colonized.	—
1813	1,000,000	1,000,000	1,000,000	1,000,000
1838	26,000,000	25,000,000	18,000,000	17,000,000
1863	181,000,000	155,000,000	69,000,000	51,000,000
1888	1,015,000,000	834,000,000	390,000,000	321,000,000

Progress unprecedented.

The progress exhibited in this table is marvellous, and as regards ratio, quite unprecedented. Though Australasia has but the population of a province of one of the great European powers, in the wealth and earnings of its people it stands before most of the secondary states, and as regards wealth and income per head of population far before any other country. The following figures are designed to illustrate this truth. Those relating to the United States of America are in some degree less favourable than usually credited to that great country, but are given upon the authority of that eminent statistician, M. G. Mulhall.

Wealth of Principal Countries.

Country.	Private Wealth.	Wealth per Head.	Public Income per Head.			Private Income per Head.			Ratio of National Debt to Wealth.
	Millions.	£	£	s.	d.	£	s.	d.	ꝑ cent.
Australasia	£1,129	300	7	12	8	41	14	0	14·70
New South Wales	410	371	8	6	11	52	0	0	10·70
United Kingdom	8,720	249	2	9	0	35	4	0	8·75
France	8,060	218	4	3	0	25	14	0	11·30
Germany	6,323	140	0	15	0	18	14	0	3·63
Russia	4,343	53	0	16	0	9	18	0	12·70
Austria	3,613	95	1	19	0	16	6	0	11·64
Italy	2,351	82	2	7	0	12	0	0	22·22
Spain	1,593	93	2	2	0	13	16	0	24·53
Belgium	806	145	2	13	0	22	2	0	7·70
Holland	987	240	2	6	0	26	0	0	8·08
United States	9,495	180	2	2	0	27	4	0	3·49
Canada	650	148	1	8	0	26	18	0	6·15
Argentine Republic	332	146	2	16	0	......			......

Public and private wealth.

The figures given above, in regard to the wealth of Australasia, do not include the value of State property, which in these colonies consists, besides unsold land, chiefly of railways, telegraphs, water and other works, more or less reproductive. If the value of public works were added to the totals given in the preceding table, the wealth of Australasia would be 1,270 millions, against which the gross public debt is 166 millions, or 13·1 per ent.; and similarly the wealth of New South Wales would be 55 millions, of which amount the public debt would represent nly 9·7 per cent.

Private wealth of Australasia.

Details from which the aggregate wealth can be computed are wanting for some of the colonies, but an estimate has been made which is believed to be fairly exact. In the following table will be found the estimated private wealth of each colony, the average per inhabitant, and the ratio which the public debt bears to the private wealth.

Private Wealth.—Total and per Inhabitant in each Colony of Australasia for 1889.

Colony.	Private Wealth.		Ratio of Public Debt to Private Wealth.
	Total.	Per Inhabitant.	
	Million £	£	Per cent.
New South Wales	410	371	10·7
Victoria	386	350	9·0
Queensland	106	266	24·4
South Australia	57	182	33·6
Tasmania	19	128	23·6
New Zealand	145	235	25·5
West Australia	6	144	21·3
Total, Australasia	1,129	300	14·7

It will be seen that the ratio of the public indebtedness to private wealth in some of the colonies reaches an extraordinary figure, though in the aggregate this ratio compares very favourably with that of most countries enumerated on page 644.

Distribution of wealth.

If the number of those who leave property at death compared with the total number of deaths in any year, and the value of the estates of such persons, be taken as indicative of the distribution of wealth throughout the rest of the community, it would appear that 13·16 per cent. of the inhabitants of Australasia have property, which is a much wider distribution than obtains elsewhere. The proportion of persons holding property in no colony is much below 11 per cent., and in two colonies is more than 15 per cent. The distribution appears most general in South Australia and Queensland, and wider in Victoria than in New South Wales. The average value of estates is greatest in this Colony, and least in Tasmania, as the following table shows.

Per centage of Persons leaving Property, and Average Value of Estates, 1883–87.

Colony.	Per centage of persons leaving Property.	Average Value of Estates of deceased persons.
		£
New South Wales	11·51	2,794
Victoria	14·65	2,267
Queensland	15·13	1,591
South Australia	15·34	1,071
Tasmania	11·08	1,043
Western Australia	10·84	1,560
Average	13·16	2,168

ncome of Australasia

The total income of the Australasian governments for the year 1888 amounted to £27,558,497, and their expenditure to £26,868,334, showing a surplus of £690,163. With the exception of Tasmania and Western Australia, all the colonies exhibit a surplus on the year's transactions. It will have been seen in the foregoing pages that, as far as New South Wales is concerned, and in this respect that colony does not differ from the others, the deficiency of one is often due to the surplus of a preceding year, which enabled a larger sum to be appropriated than actually received. The revenue is mainly derived from taxation which produced £10,687,319, and from public services such as railways, post and telegraphs, which yielded £10,559,504, in all £21,246,823, or 77 per cent. of the total revenue. The revenue from the sale or leasing of Crown lands has fallen considerably both in the gross sum and proportionately to the amount received.

llowing table shows the revenue under the various heads h colony, as well as the total received :—

Revenue of Australasia.

ony.	Taxation.	Land.	Public Services—Railways, Post Office, Telegraphs.	Other Sources.	Total.
	£	£	£	£	£
th Wales	2,681,883	2,268,253	3,664,100	272,124	8,886,360
....	3,071,003	656,267	3,227,021	653,307	7,607,598
nd	1,577,671	638,472	997,976	248,978	3,463,097
stralia...	739,353	319,510	1,171,448	264,245	2,494,556
Australia	179,944	81,348	61,083	34,628	357,003
a	405,807	76,859	107,305	50,097	640,068
land......	2,031,658	297,856	1,330,571	449,730	4,109,815
ustralasia	10,687,319	4,338,565	10,559,504	1,973,109	27,558,497

Public revenue per head.

revenue per head averaged £7 12s. 8d., varying from 8d. for Tasmania to £9 3s. 7d. for Queensland. The rate colony subdivided into the classification already adopted follows :—

Revenue of Australasia per head.

ony.	Taxation.	Land.	Public Services—Railways, &c.	Other Sources.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
th Wales	2 10 5	2 2 7	3 8 10	0 5 1	8 6 11
....	2 17 9	0 12 4	3 0 8	0 12 3	7 3 0
nd	4 3 7	1 13 11	2 12 11	0 13 2	9 3 7
ustralia	2 7 3	1 0 5	3 14 11	0 16 11	7 19 6
Australia	4 5 0	1 18 5	1 8 11	0 16 4	8 8 8
a	2 16 3	0 10 9	0 14 10	0 6 10	4 8 8
land	3 7 1	0 9 10	2 4 0	0 14 10	6 15 9
al	2 19 3	1 4 0	2 18 6	0 10 11	7 12 8

Receipts from taxation.

receipts from taxation show a fairly large increase during elve years which have elapsed since 1876, the proportion year named being about 35 per cent. of the whole receipts, while in 1888 the proportion had risen to 38·78 per cent. The increase, however, has not been general, and is due mainly to the larger proportion of revenue from taxation now obtained in New South Wales and New Zealand than formerly, as will be seen from the following statement :—

Revenue of Australasia from Taxation.

Colony.	Proportion of revenue derived from taxation.		Revenue from taxation per Head.	
	1876.	1888.	1876.	1888.
	per cent.	per cent.	£ s. d.	£ s. d.
New South Wales	23·05	30·17	1 18 5	2 10 5
Victoria	41·16	40·37	2 5 0	2 17 9
Queensland	49·26	45·55	3 7 11	4 3 7
South Australia	34·84	29·64	2 0 9	2 7 3
Western Australia	56·14	50·40	3 6 8	4 5 0
Tasmania	63·00	63·40	2 0 3	2 16 3
New Zealand	37·70	49·43	3 9 8	3 7 0
Total	35·10	38·78	2 11 0	2 19 3

Large public expenditure of New South Wales.

The expenditure of the Government of New South Wales is far larger than that of any other colony of the group ; it exceeds that of Victoria by one and a half million, and New Zealand by more than four and three quarters, and amounted to £8,778,851 out of a total of £26,868,334.

Australasian expenditure.

The expenditure of all the colonies upon the working of railways and tramways was £5,221,459 ; on other public works and buildings, and on the postal and telegraphic service, £3,511,857 ; interest on public debt, £6,682,378 ; and on other services, chiefly defence, education, and civil government, the expenditure was £11,452,640, the proportion under each head being—

Working Expenses of Railways and Tramways ...	19·43	per cent.
Public Works, Post and Telegraphs	13·07	„
Interest on Debt	24·87	„
Other Services—Civil Government	42·63	„

e total expenditure for each colony under the heads given
e was—

Subdivision of expenditure.

Expenditure of Australasia.

Colony.	Railways and Tramways.	Other Public Works, including Post and Telegraphs.	Interest on Debt.	Other Services.	Total.
	£	£	£	£	£
South Wales	1,824,291	1,657,117	1,745,695	3,551,748	8,778,851
ria	1,574,786	643,113	1,385,121	3,684,131	7,287,151
nsland	531,144	315,763	1,015,667	1,505,831	3,368,405
Australia...	483,207	259,859	717,906	915,427	2,376,399
ernAustralia	44,080	66,917	63,820	210,313	385,130
ania	88,056	190,093	184,613	246,724	709,486
Zealand......	675,895	378,995	1,569,556	1,338,446	3,962,912
Total	5,221,459	3,511,857	6,682,378	11,452,640	26,868,334

will be seen from the foregoing statement that 19·43 per
of the whole expenditure is for working the railways and
ways of the colonies, a service not usually undertaken by the
. The ordinary expenses of civil government amount to
3 per cent. of the expenditure; public works, post and
raphs absorb 13·07 per cent., and the interest on the public
24·87 per cent. The rates of expenditure per head of popu-
n were as follows :—

Railway expenditure.

	£	s.	d.
Railway and Tramways	1	8	11
Other Public Works—Post and Telegraphs......	0	19	6
Interest on public debt..................................	1	17	0
Other Services—Civil Government..................	3	3	5
Total........	£7	8	10

us. Out of the sum required to pay interest, viz., £6,682,378, wo and a half millions are directly recouped by the profit lic railways, while a further amount is yielded by water sewerage, and other works. Besides this, there is a large revenue obtained by each colony from the opening up ublic lands, and from the construction of break-waters, uses, bridges, and other works of public utility. Victoria nly colony, however, which enjoys an actual surplus of over interest, from works paid for out of the proceeds of The following table shows the expenditure of the Colonies ans. In the case of New South Wales there was an ded balance of £1,703,045, which could not be distributed he heads given.

Indirect revenue from public works.

Expenditure of Australasia from Loans.

ony.	Railways.	Water Supply and Sewerage.	Immigration.	Other Services.	Total.
	£	£		£	£
th Wales	30,990,578	3,839,697	569,933	8,699,941	44,100,149
....	26,575,706	5,345,150	......	2,706,526	34,627,382
nd	14,467,116	541,022	2,498,433	8,334,379	25,840,950
stralia...	10,883,928	2,726,500	......	5,537,272	19,147,700
Australia	823,099	......	20,000	432,101	1,275,200
a	1,902,224	......	235,714	2,361,532	4,499,470
land......	13,634,500	559,996	2,142,460	20,634,735	36,971,691
l	99,277,151	13,012,365	5,466,540	48,706,486	166,462,542

xpenditure from loans for all the colonies amounted to 3d. per head; the rate for New Zealand, Queensland, and ustralia being from about £15 to £22 above the average. leading colonies Victoria stands lowest on the list with an ture of £32 11s. 2d.; but, as already explained, this ture is not only not a burthen to that colony, but yields

Expenditure from loans.

a small sum towards the general revenue. New South W compares very favourably with most of the colonies, and ha regard to her great natural and acquired wealth the debt per is by no means large, especially as the charge amounts to 19·68 per cent. of the general expenditure.

Public Debt of Australasia per Head of Mean Populatic

Colony.	Railways.			Water Supply.			Immigration.			Other Services.			T
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£
New South Wales	29	2	4	3	12	2	0	10	8	7	9	4	40
Victoria	24	19	9	5	0	6	....			2	10	11	32
Queensland	38	7	1	1	8	8	6	12	5	22	2	0	68
South Australia	34	16	0	8	14	0	....			17	14	1	61
Western Australia	19	9	1	....			0	9	5	10	4	3	30
Tasmania	13	3	7	....			1	12	8	16	7	3	31
New Zealand	22	10	5	0	18	6	3	10	9	34	1	9	61
Total	27	10	1	3	12	1	1	10	3	13	9	10	4

PART XIX.

Instruction, Science, and Religion.

PRIMARY EDUCATION.

Early system of subsidies.

THE history of primary education in New South Wales is naturally divided into four periods. During the first eriod, which lasted until 1848, the system in force was purely enominational, the Government granting to the heads of religious odies assistance in proportion to the amount expended by them r educational purposes. No provision was made for the establishment of schools entirely under State control, and considerable issatisfaction was the result. As early as 1834 attempts were ade to modify the system in force, and five years later a grant as made with the object of securing undenominational education r the children of those who preferred it. It was not, however, ntil 1844 that any definite steps were taken in this direction. n that year a Committee of the Legislative Council reported in vour of the adoption of the Irish National School system, and, in ccordance with this recommendation, an Act was passed constituting two Boards, to one of which was entrusted the administraion of denominational education, and to the other the undenomiational, or, as it was called, the National system. This anomaly f two rival Boards existed for eighteen years, until it was bolished by the passing of the Public Schools Act of 1866. This Act also provided for two distinct classes of schools, though all chools receiving aid from the State were nominally under the ontrol of a Board appointed by the Government, and styled the Council of Education. The Public Schools were entirely

First grant in aid of undenominational education.

The Public Schools Act of 1866.

administered by this Board, but the denominational schools were partly governed by the various religious bodies by whom they had been founded. Although the system established by the Act of 1866 was essentially one of transition, education nevertheless made considerable progress during the years of its administration. But it was found impossible to maintain this dual system, not only on account of its intrinsic defects but because the principle of granting State aid to religious schools was repugnant to the feelings of the majority of the people.

State aid to denominations abolished.

In 1880 State aid to denominational education was at length abolished. By an Act passed under the auspices of Sir Henry Parkes, which received the Royal assent on the 16th April, 1880, the entire educational system of the Colony was remodelled, and amongst other important provisions it was enacted that State grants to denominational schools should cease with the year 1882. So great a change was not wrought without much opposition, and many denominational schools which existed at the period of the withdrawal of State aid were maintained by the religious bodies to which they belonged. Although withdrawing aid from denominational schools, the Act of 1880 does not entirely banish religious instruction from State schools. On the contrary, it provides that one hour each day shall be available, during which the authorized teachers of any church may impart religious instruction to the children of their faith, provided the parents of the children are agreeable thereto. The privilege thus afforded is, to some slight extent, taken advantage of by the clergy of all denominations.

Instruction compulsory.

The second great principle of the Act is that instruction shall be compulsory for all children between the ages of 6 and 14 years. By section 20 it is made obligatory upon the parents or guardians of all children between the specified ages to cause them to attend school for a period of at least seventy days in each half-year, under certain prescribed penalties. Though compulsory, instruction is not altogether free. All parents in a position to contribute towards their children's education are required to pay, in State schools, the nominal sum of 3d. per week for each child, but in cases where inability to pay even this small sum can be fairly pleaded, the Minister, or the Public School Board of the district, has power to remit the fee entirely, so that no child is denied the benefits of that instruction which the State provides. Other facilities are granted to children attending school. They are permitted to travel free on the State railways as far as the school nearest their residence, a concession of no little importance in the country districts. The Act makes no attempt to interfere with the rights of parents to send their children to whatever school they choose, whether supported by the State or by private persons, provided the attendance specified by the Act is given. No impediment is offered to the establishment of private schools, but no State assistance is given to them, either directly or indirectly.

Liberal provisions of the Act.

Secondary education.

The care of the State is not entirely devoted to primary instruction, for the claims of secondary education are fully recognized, and the Act of 1880 provides Superior Public Schools and High Schools, for children of both sexes, wherein such education may be obtained as will fit the pupils for commercial or professional callings, or the higher educational curriculum of the University. Here, however, the direct assistance of the State terminates, although indirectly it goes a great deal further and provides ample endowments for University education.

Progress of education.

Great as has been the material progress of the Colony, its intellectual advancement has been much more rapid. In the records of the marriage registers signed by marks, a most accurate gauge of educational progress will be found. The earliest official record of marriages was for the year 1857, when out of 5,804 persons married 1,646 or 28·36 per cent. were unable to sign the marriage register. During 1888 the number of such persons was only 587, or 3·74 per cent. of the total number married. A generation has passed away during the period embraced by the following table, and the progress shown thereby cannot fail to be interesting.

Progress of Education in New South Wales, as shown by the Number of Persons signing Marriage Register with Marks.

Year.	Persons married.	Percentage signing with marks.	Number signing with marks.	Year.	Persons married.	Percentage signing with marks.	Number signing with marks.
1857	5,804	28·36	1,646	1873	8,768	14·26	1,252
1858	5,984	20·86	1,248	1874	8,686	11·96	1,039
1859	6,590	26·86	1,770	1875	9,210	12·26	1,129
1860	5,890	26·46	1,559	1876	9,260	10·47	970
1861	6,444	24·60	1,585	1877	9,988	9·76	975
1862	6,652	25·01	1,664	1878	10,634	8·10	863
1863	6,628	22·69	1,504	1879	10,782	7·58	818
1864	6,960	22·70	1,580	1880	11,144	6·66	743
1865	7,156	22·06	1,579	1881	12,568	6·94	872
1866	6,924	21·63	1,498	1882	13,896	5·63	782
1867	6,852	18·84	1,291	1883	14,810	6·10	903
1868	7,472	20·14	1,505	1884	14,964	5·23	783
1869	7,598	19·19	1,458	1885	15,236	4·74	723
1870	7,696	18·23	1,403	1886	15,622	3·98	622
1871	7,906	16·96	1,341	1887	15,180	3·50	531
1872	7,850	13·62	1,069	1888	15,688	3·74	587

Marvellous progress of education.

The progress exhibited in the above table is marvellous. The residuum of population not yet educated is already very small, and, moreover, of the 587 persons using marks a large proportion were not born in New South Wales, but arrived in this Colony too late in life to avail themselves of its educational system. The proportion of persons using marks is somewhat higher in this Colony than in any other member of the group, except Queensland. This is in no sense due to the superiority of the educational system of those colonies but rather to the number of immigrants

The number of children given in the above table as enrolled in the various schools exceeds, in almost every case, the actual school attendance, as the gross enrolment for the year is given, and not the mean for each quarter. The latter information cannot be obtained except for recent years, but the figures as they stand give a basis of comparison, which is not without value.

Enrolment of children.

The following table shows the gross enrolment of distinct children during the eight years which closed with 1888, as well as the quarterly enrolments, in all the schools of the Colony. The last column may be taken as giving the nearest approximation to the number of children actually under tuition in State and private schools.

Year.	Schools.	Teachers.	Scholars.		
			Gross enrolment.	Mean quarterly enrolment.	Percentage of children of School age attending School.
1881	2,066	3,772	166,536	145,936	83·66
1882	2,161	4,154	188,507	156,768	82·08
1883	2,315	4,543	189,983	164,270	82·38
1884	2,535	4,860	202,519	174,544	83·95
1885	2,666	5,267	210,743	183,873	83·96
1886	2,833	5,659	220,724	192,010	83·50
1887	2,925	5,714	224,510	197,712	81·91
1888	2,964	5,870	229,043	201,083	80·27

Number of children of school age.

The number of children of school age—that is to say, from five to fifteen years—during 1888 was probably not less than 260,000. Of this number 160,919 were receiving instruction in State schools, and 40,164 in private schools, or in all 201,083; while the remainder, numbering 59,000, were either receiving no instruction, or were being taught at home. No reliable estimate of the number of children under home tuition can be made, neither is it possible to determine the number of those who have ceased to attend school before reaching their fifteenth year, but it is very probable that considerable numbers are to be found in both classes

Compulsory clauses not strictly enforced.

wing to the sparseness of the population in nearly all the try districts of the Colony, the compulsory clauses of the ruction Act cannot be strictly enforced. Nevertheless, the ber of children growing up in absolute ignorance is by no s great, and, though the proportion of such children cannot ven approximately determined, there is sufficient evidence to ant the conclusion that it is steadily decreasing. At the last e census the proportions of children from 5 to 10 years who d read and write were in every ten thousand as under :—

	1861.	1871.	1881.
Read and write	2,355	3,470	4,413
Read only	3,289	2,752	1,982
Unable to read	4,356	3,778	3,605

king the children from 10 to 15 years, the comparison is still satisfactory.

	1861.	1871.	1881.
Read and write	6,769	7,666	8,804
Read only	1,854	1,292	614
Unable to read	1,377	1,042	582

Progress of education amongst children.

e steady decrease in the proportion of illiterate children from to 1871, and from 1871 to 1881, is plainly visible from the e tables, and there can be little doubt that this satisfactory ase has since continued.

PUBLIC INSTRUCTION—STATE SCHOOLS.

Schools when present Act came into force

hen the present Public Instruction Act came into operation, e 30th April, 1880, the Council of Education ceased to exist, handed over to the new administration the schools, until then r its control. At the date mentioned, there were maintained, ubsidized by the Government, 1,220 schools, attended by 534 scholars, thus distributed :—

	No. of Schools.	No. of Pupils.
Public	705	68,823
Provisional	313	8,312
Half-time	97	1,683
Denominational	105	22,716
	1,220	101,534

Enrolment since passing the Act.

At the close of 1882 the connection of the denominational schools with the State ceased, and the subsequent year is marked, as was to have been expected, by a considerable falling off in the number of children who were receiving their education at the expense of the State. The check only operated for a short period, as the year 1884 shows a recovery of more than the ground lost. This will be seen by the following table which shows the enrolment and attendance of children at State supported schools only:—

Year.	Gross enrolment of distinct children.	Quarterly enrolment.	Average attendance.
1880	*	111,277	72,969
1881	146,106	125,506	82,890
1882	166,611	134,872	90,944
1883	155,918	130,205	88,546
1884	167,134	139,159	95,215
1885	173,440	146,570	100,462
1886	179,990	153,244	105,538
1887	184,060	157,262	106,408
1888	186,692	160,919	112,220

* Not ascertained.

Increase in enrolment.

In the quarterly enrolment for 1888, 19,520 of the children were under the age of 6 years, 129,921 between 6 and 14, an 10,560 over 14 years of age.

Since the withdrawal of aid from denominational schools th increase in the average quarterly enrolment at State schools h been 23·59 per cent., the increase in each year being—

1884	6·88	per cent.
1885	5·32	,,
1886	4·55	,,
1887	2·62	,,
1888	2·32	,,

Number of schools.

The number of schools under the direct control of the Department, during 1888, was 2,271, thus classified—

High Schools	5
Public Schools—mixed	1,577
,, Two departments	46
,, Three departments	72
Provisional Schools	317
Half-time Schools	223
House-to-house	79
Evening Schools	12
Total	2,271

State Schools in Australasian Colonies.

e following table gives the number of State schools in each e Australasian Colonies, together with the number of scholars the average attendance :—

State Schools.

Colony.	Number of Schools.	Number of Teachers.	Number of Scholars. [Average Attendance.]	Average attendance of Pupils per School.
South Wales	2,271	3,913	112,220	49
oria	1,933	4,234	128,958	66
nsland	544	1,480	38,926	71
h Australia	536	934	45,236	84
tern Australia	77	110	2,533	33
ania	220	429	8,731	39
Zealand	1,128	2,839	90,108	79

Number of Teachers.

he teachers in New South Wales during the year numbered 3, viz., 1,976 males, and 1,937 females.

	Males.	Females.
In charge of departments	1,463	844
Assistants	133	348
Pupils	355	635
Others	25	110
	1,976	1,937

e average number of pupils on the basis of the mean quarterly lment per teacher was, therefore, 40·9, and the average attend- per teacher, 28·6, while the average enrolment of children school was 70·9.

Public School curriculum.

he curriculum of the public schools of New South Wales pro- s merely for imparting to children a sound course of primary ation, and the elements of those sciences which form the basis igher courses of education, scientific or technical. The State ides separately the necessary facilities for acquiring technical wledge, under a system of training recently introduced, about h more will be said further on.

he staff of male and female Public School teachers is trained in normal schools of the Colony—the Fort-street training school male teachers, and the Hurlstone training school for female hers. These establishments are under the strictest supervision

department as to their physical aptitude and th
their constitutions, in view of the arduous natur
they are called upon to perform.

During the year 1888 the number of teachers i
the Department of Public Instruction was, as alread
The teachers obtain promotion only after passi
examinations, which are so framed as to efficiently
gress in general capacity. There are ten classes of
in charge of schools or departments, their emolu
from £128 to £500 per annum including residenc
teachers in charge of Provisional Schools receiv
£90 ; assistant teachers are paid at rates varying
£250 ; and pupil-teachers from £36 to £66 per an
teachers in charge of schools or departments are
to £236 per annum, including value of reside
teacher's salaries vary from £100 to £168 ; and
receive from £24 to £48 per annum.

Public School Boards.

The local supervision of the Public Schools of
placed in the hands of Public School Boards ap
various districts of the Colony, under the provision
Instruction Act. These boards exercise a general
the Public Schools in their districts, but cannot int
internal discipline or management of the schools.

Year.	For school premises.			For the maintenance of schools.			For administration, including the amount paid as retiring allowances.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1881	1	4	9¾	3	15	3	0	14	3¾	5	14	4½
1882	2	10	2¾	3	15	1¾	0	10	8¼	6	16	0¾
1883	4	8	3¾	4	2	0¼	0	15	3½	9	5	7½
1884	3	3	11	4	4	2¾	0	14	5¾	8	2	7½
1885	1	15	5¼	4	3	7	0	13	1¼	6	12	1½
1886	1	9	4½	4	1	6	0	13	1½	6	4	0
1887	1	2	6½	4	3	7½	0	11	3½	5	17	5½
1888	0	15	1	4	1	7¾	0	9	8½	5	6	5

Cost per child in other colonies.

In the Public Schools of New South Wales the cost per child was until 1888 higher than in the other Australian Colonies; the figures for last year, however, show this Colony has now reduced its expenditure per child below that of either Victoria or Queensland.

	Total cost per child of the average attendance.
New South Wales	£5 6 5
Victoria	5 12 11
Queensland	5 14 11
South Australia	4 8 9
Western Australia	4 0 8¾
New Zealand	4 4 10

The cost per child in average attendance at the Board Schools, England, was £3 5s. 5d.

Expenses incidental to starting present Act.

It must be borne in mind, however, that a considerable outlay was needed to build the necessary school-houses after the Act of 1880 became law. Under this Act the expenses contingent upon the necessity of obtaining efficient results, in a country so sparsely populated as New South Wales, were unavoidably great. School-houses had to be built, teachers required training, and the whole machinery for providing schools and teachers had to be started in so many parts of the country where there were none but denominational schools, and frequently no educational establishments at all. To these initial expenses was due, in a great measure, the relatively high cost of public education in the Colony of New South Wales during past years. A great reduction is observable in 1888, and it may be expected that the cost will be still further lessened, as the school-houses have been built with due regard to the increase in the number of scholars which must be expected in a young, prosperous, and growing colony. It may be added that most of the school-buildings are of such a character as would do credit to the most advanced countries in the world, the greatest care being taken to have them replete with all the modern improvements, which the experience of centuries has suggested in older communities.

Comparative cost of education.

When comparing the average cost of education per child in attendance in New South Wales with that of its neighbour, Victoria, the results for 1888 must appear very satisfactory, especially when it is borne in mind that the smaller extent of the territory of the latter colony, and the greater travelling facilities, which a railway system proportionately much larger offers, must necessarily reduce the cost of education. In South Australia and Western Australia settlement is confined to certain districts in which the population is more compact, whilst the whole of the territory of New South Wales, if we except the extreme west, may be regarded as everywhere settled, at least to such an extent as to necessitate the extension of the Public School system throughout the greater part of the Colony. But the spread of public instruction is considered so pre-eminently important an object that the Legislature has at all times expressed its readiness to make every sacrifice, and spare no expense to render the system of national education which it adopted in 1880 efficacious.

Amount expended on primary education.

The following table will show the total amount expended by the State since the year 1881, and the annual amount per head of population provided for the primary education of the children of the Colony :—

Year.	Amount.	Per head of population.	Year.	Amount.	Per head of population.
	£	s. d.		£	s. d.
1881	474,157	12 7	1885	663,697	14 3
1882	618,800	15 7	1886	654,411	13 1
1883	821,853	19 8	1887	624,983	12 0
1884	774,357	17 7	1888	597,102	11 3

Details of expenditure on educatio

This statement would not be complete if some details were not urnished, showing under what principal heads this expenditure as incurred, and the amount of school fees received during the ame period :—

State Expenditure on Education.

ear.	Number of Schools.	Gross enrolment of distinct Pupils.	On school premises.	On maintenance of Schools, including Administration, &c.	Total.	School Fees.	Net State Expenditure.
			£	£	£	£	£
881	1,667	146,106	102,903	371,254	474,157	46,347	427,810
882	1,795	166,611	228,401	390,399	618,800	51,312	567,488
883	1,706	155,918*	391,000	430,853	821,853	51,427	770,426
884	1,912	167,134	304,383	469,974	774,357	56,766	717,591
885	2,046	173,440	178,002	485,695	663,697	58,926	604,771
886	2,170	179,990	155,072	499,339	654,411	63,165	591,246
887	2,236	184,060	119,957	505,026	624,983	63,896	561,087
888	2,271	186,692	84,575	512,527	597,102	69,554	527,548

* Certified Denominational Schools were discontinued at the close of 1882.

School fees.

It will be seen that the amount directly contributed by parents wards their children's education is but a small proportion of the tal cost. In 1888, however, it was proportionately larger than any year since the existing Act came into force, as well as larger r head, as may be seen from the following statement :—

Average cost of Education per Child.

Year.	Cost to State per Child of Average Attendance.	Total Cost per Child of Average Attendance.	Amount of Fees received per Child of Average Attendance.
	£ s. d.	£ s. d.	£ s. d.
1880	4 16 7	5 12 2	0 15 7
1881	5 3 2	5 14 4	0 11 2
1882	6 4 10	6 16 1	0 11 3
1883	8 14 0	9 5 7	0 11 7
1884	7 10 9	8 2 8	0 11 11
1885	6 0 5	6 12 1	0 11 8
1886	5 12 0	6 4 0	0 12 0
1887	5 5 5	5 17 5	0 12 0
1888	4 14 0	5 6 5	0 12 5

The number of free scholars during the year 1888 was 7,256, 3,829 boys, and 3,427 girls, or 6·46 per cent. of the total children attending school.

chool savings. anks.

In accordance with a design long contemplated, savings' banks were opened during 1887 in connection with the public schools of the Colony. At the close of the past year Banks were established at 389 schools, and the deposits amounted to £10,750, of which £5,571 were transferred to the children's own separate account in the Government Savings' Bank. The object aimed at in establishing these banks is to inculcate the principles of the science of economics, while yet the minds of the children are susceptible of deep impressions. A systematic training for this purpose is a thing to be desired in every public school, in order to engender habits of thrift amongst school children, to indoctrinate them as to the uses and effects of money, that are ulterior to immediate gratifications, and to make them recognize and calculate upon poverty and degradation as the natural results of waste and improvidence.

PRIVATE SCHOOLS.

Attendance increasing.

The attendance at private schools has increased twofold since 1882. This is entirely due to the withdrawal of aid from denominational schools. At the close of the year mentioned there were 124 denominational schools under the control of the Education Department, with 346 teachers, and 29,651 scholars. Many of these schools ceased to exist immediately on the withdrawal of State aid, and the children by whom they were attended were transferred for the most part to the ordinary Public Schools of the Colony. Some of the schools, however, were still maintained, chiefly those connected with the Roman Catholic Church, and thenceforth appear in the returns as private schools. The increase in the number of private schools during 1883 was 97, and the increase in the attendance of children was 12,361, so that, at the lowest computation, 27 denominational schools were immediately closed, and 17,290 children transferred to Public Schools.

Increase in private schools.

The following table gives the particulars respecting private schools from 1881 to 1888 :—

Private Schools.

Year.	Schools.	Teachers.	Scholars.	Year.	Schools.	Teachers.	Scholars.
1881	507	1,129	18,317	1885	611	1,654	35,967
1882	491	1,154	19,746	1886	647	1,808	38,766
1883	588	1,473	32,107	1887	689	1,873	40,450
1884	611	1,601	33,607	1888	679	1·854	40,164

Classification of private schools.

Dividing the private schools of the Colony into their respective classes, there were in operation during 1888 :—

	Schools.	Teachers.	Scholars.
Undenominational	357	764	9,473
Church of England	66	154	3,100
Roman Catholic	247	916	27,172
Wesleyan	2	2	45
Presbyterian	4	14	163
Lutheran	2	2	61
Other Denominational	1	2	150
Total	679	1,854	40,164

Roman Catholic Schools.

Not a few of the schools returned as undenominational are religious schools, though no definite form of religious opinions is inculcated therein. Of distinctly religious schools, those of the Roman Catholic Church comprise the great majority, numbering 76·7 per cent. of professedly denominational schools, and 88·5 per cent. of the scholars educated therein. The number of pupils attending these schools was not ascertained for the years preceding 1886. On the withdrawal of State assistance from denominational schools in 1882 there were in operation under the Department of Education, 75 Roman Catholic Schools, attended by 16,595 pupils, while in 1888 there were 247 schools, attended by 27,172 pupils. There were, however, some Roman Catholic Schools prior to 1882 not receiving aid from the State, and, on the other hand, some of the schools which were closed in 1882 have not since been opened. The following are the figures for the three years, for which returns are available.

Roman Catholic Schools.

Year.	Schools.	Teachers.	Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.
1886	215	896	11,222	13,798	25,020	9,533	11,766	21,279
1887	238	897	12,518	14,474	26,992	10,158	12,108	22,266
1888	247	916	12,535	14,637	27,172	10,010	11,799	21,809

hurch of ngland chools.

The Church of England is the only other religious body maintaining schools of importance. During 1888 such schools numbered 66, and were attended by 3,100 pupils. At the end of 1882 there were in existence 42 Church of England Schools, frequented by 11,927 children. The following table shows the state of these schools during the past three years :—

Year.	Schools.	Teachers.	Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.
1886	56	143	1,794	1,579	3,373	1,662	1,346	3,008
1887	73	167	1,815	1,514	3,329	1,588	1,258	2,846
1888	66	154	1,548	1,552	3,100	1,272	1,242	2,514

HIGHER EDUCATION.

urriculum of igh Schools.

It has already been mentioned that the State has made provision for higher education, by the establishment of High Schools in the metropolis and the principal centres of population. The curriculum of these schools is of such a character as to enable students to complete the course of instruction, the basis of which they acquired in the Public Schools, and, if they so wish, to prepare themselves for the University examinations. Admission to these schools is by examination only. There were at the close of the year 1888 five High Schools for boys and girls, and the gross enrolment for that year was 408 boys and 329 girls, making a total of 737 children. The average attendance was 551. During the year, 70 pupils passed the junior, 20 the senior, and 11 the matriculation examinations at the University.

Superior Public Schools.

Superior Public Schools, in which the subjects taught embrace, in addition to the ordinary course prescribed for Public Schools, such other subjects as will enable the students to compete at the senior and junior public examinations, are also established. There were 43 of these schools in existence at the end of 1888. They supply a want long felt in the community, and their number increases year by year.

STATE-AIDED EDUCATIONAL ESTABLISHMENTS.

State-aided schools.

In addition to the various classes of Public Schools maintained at the State's expense, and directly controlled by the officers of the Department of Public Instruction, there exist several institutions of an educational character which receive an annual subsidy from the Government. The most important of these is the Sydney Grammar School, which is one of the principal schools in the Colony. In 1888, the average quarterly enrolment was 426, and the daily attendance 405. The numbers of pupils who attended the University examinations were as follows:—Junior, 37, of whom 30 passed; Senior, 9, of whom 7 passed; and Matriculation, 18, of whom 14 passed. Towards maintaining this school the Colonial Treasury contributed the sum of £3,233, the school fees and other revenue amounting to £6,100.

Deaf and Dumb and Blind.

The Institution for the Deaf and Dumb and the Blind, principally supported by private contributions, received a State grant of £450, and, in 1888, a sum of £166 in addition as school fees for Government pupils, £493 was also received from the Government of Queensland, and £213 from Government of Tasmania. At the close of the year there were in this institution 73 children, 50 being males and 23 females. The total number on the roll during the year was 86, and of this number 54 were under the age of 14 years and 32 over it.

THE UNIVERSITY.

Sydney College.

In the year 1849 Mr. Wentworth presented a petition to the mixed Legislative Council from certain shareholders of a proprietary school, known as Sydney College, praying for the appointment of a select committee of the House "to consider the best means of carrying on the institution so as to afford the youth of the Colony the means of obtaining instruction in the higher branches of literature and science." The committee was appointed, but had, however, somewhat different instructions, and was directed to "consider and report how best to institute an university for the promotion of literature and science, to be endowed at the public expense." The committee, after a few weeks' deliberation, brought up its report, recommending the establishment of an university with a permanent endowment of £5,000 per annum out of the general revenue, and a Bill was brought in by Mr. Wentworth in accordance with the report. The Council was shortly afterwards prorogued, and the measure consequently lost for that session. In 1850 the bill, which was based mainly on the model of University College, London, was reintroduced by Mr. Wentworth, and, after some discussion and a few amendments, was passed, receiving the Royal assent on 1st October of that year.

The endowment was given for "defraying the stipends of teachers in literature, science, and art," and for administration purposes; there being no provision made for teaching any other branch. Power was, however, given to examine and to grant degrees after examination in law and medicine as well as in arts. The University was to be strictly undenominational, and the Act expressly prohibited any religious test for admission to studentship or to any office, or for participation in any of its advantages or privileges. Residence was not contemplated otherwise than in affiliated colleges, but authority was given to license tutors and masters of boarding-houses with whom students of the University might live.

Senate.

A Senate of sixteen Fellows was constituted by the original Act to govern the University, and they were empowered to elect from among themselves their own Provost and Vice-Provost, which titles were later on changed to those of Chancellor and Vice-Chancellor. The Fellows were, in the first instance, nominated by the Crown, but were to be replaced, as vacancies arose, by the Fellows themselves until there should be 100 graduates holding the degrees of Master in Arts, or Doctors in Law or Medicine. The first Senate commenced their labours at the close of the year 1850, with Mr. Edward Hamilton, M.A., as Provost, and Sir Charles Nicholson, M.D., as Vice-Provost. They shortly established three chairs in Classics, Mathematics, and Chemistry and Experimental Physics, and sent to England for competent professors to fill them; and on the 11th October, 1852, the University was opened with an imposing ceremony, in presence of the Governor and principal officers, and under the presidency of Sir Charles Nicholson, and twenty-four matriculated students were admitted to membership.

Charter.

In 1858 a royal charter was granted, which declares that "the degrees of this University in arts, law, and medicine shall be recognized as academical distinctions of merit, and be entitled to rank, precedence, and consideration in the United Kingdom as fully as if the said degrees had been granted in any university of the United Kingdom."

Since the passing of the original Act various changes have been made by amending Acts, of which the principal are as follows:—By an Act passed in 1857, those who had taken the degree of B.A. or M.A. received certain privileges in respect of admission to the Bar or to the Roll of Solicitors. In 1861 it was directed that in addition to the ordinary sixteen Fellows there should be not fewer than three nor more than six *ex officio* members of the Senate who should be Professors in such branches of learning as the Senate should by any by-law select; and such Professors and other Public Teachers and examiners and every superior officer declared to be such by the by-laws should be a member of the University, with the same rights and privileges as to the election of new Fellows as persons holding the degrees of M.A., LL.D., and M.D. In 1881 *Ad eundem* degrees, with equal privileges, were authorized to be conferred; and B.A.'s of three years standing were empowered to vote at new elections of Fellows. In 1884 the Senate's powers as regards teaching and degrees were extended by enabling it to give instruction and grant degrees or certificates in all branches of knowledge with the exception of Theology or Divinity, subject to a proviso that no student should be compelled to attend lectures or to pass examinations in Ethics, Metaphysics, or Modern History; and by the same Act it was directed, in accordance with a previous by-law of the Senate, that the benefits and advantages of the University should extend in all respects to women equally with men.

The number of persons entitled to vote at the elections of new Fellows reached 100 in 1872, whereupon the Senate passed by-laws in respect of such elections, and styled the electoral body "Convocation." This body, including the additions made by the several amending Acts, and comprising heads of affiliated colleges, who had been declared to be superior officers of the University under the Act of 1861, now numbers nearly 500.

The public endowment of the University stood at £5,000 a year until 1880, when £1,000 was added for assistant lectureships, but in 1877 a bequest of the value of £6,000, and producing about £300 a year, was made by Mrs. Hovell, widow of the explorer of that name, for instruction in Geology and Physical Geography, which, together with fees, enabled the Senate to divide the Chair of Chemistry and Experimental Physics into two, to the first of which Geology and Physical Geography were attached. In 1882 a further vote of £5,000 was made to enable the Senate to establish Schools of Medicine and Engineering, and to give some further help to the original Department of Arts. Medical and Engineering Professors and Lecturers, and a Professor of Natural History, and some small lectureships in Arts were created; but this sum was soon found inadequate for the intended purposes, and has been increased to £7,900, inclusive of the £1,000 granted in 1880. Allowances have also been made for apparatus, and a sum of £2,000 per annum has been granted for Evening Classes in Arts. Principally out of this endowment a system of Extension Lectures to non-matriculants was commenced in 1882, first in the metropolis, but spreading to places at a distance; and it is not improbable that as time goes on and means increase these lectures may become a very prominent feature in the action and influence of the University.

In 1855 the present site was granted by Governor Sir Charles Fitzroy, by Royal authority, for the erection of suitable buildings, and also to provide land for the prospective erection of four denominational Colleges. Before this grant was made the work of the University had been carried on in the old Sydney College, which, together with its library and even an endowment for a Scholarship bequeathed by Mr. Solomon Levy, was purchased by the Government for the University, and a grant of £50,000 had been made by Parliament in 1853 as a building fund. The present site, granted in 1855, comprises about 126 acres, formerly known as Grose Farm, to which a further grant of 9 acres was afterwards added for the enlargement of the domain or park. As early as 1854 an Act was passed to aid and partly endow four colleges within the University. Contributions of not less than £10,000, and not more than £20,000, were to be made from the general revenue for building funds, provided that an equal sum were subscribed by private individuals, and £500 a year was to be paid annually by the Government towards the stipends of Principals for each College. Just before this step had

Grose Farm granted to the University.

Affiliated Colleges.

been taken to establish a Church of England College, St. Paul's; and St. John's Roman Catholic College followed in 1857, and the Presbyterian College of St. Andrew's in 1867. The Wesleyan body, for whom an equal area had been set apart, declined to accept it, and in 1873 some 12 acres of the land originally intended for a site for their college, was resumed by the Crown and dedicated to the Prince Alfred Hospital; and provision was made for the establishment by the University of a Medical School in connection with it and for the joint control of the University Senate and Hospital Board in respect of all appointments of the medical and surgical officers of the Hospital. But while the regulations under which students have access to the Hospital are framed by the Hospital Board, with the Senate alone rests the appointment of Professors and Lecturers in the Medical School.

Public Examinations.

The system of Public Examinations, similar in general character and purpose to the middle class examinations of Oxford and Cambridge, was instituted in 1867, and has gradually spread, till last year there were no less than thirty-five local centres other than Sydney, six of which were in the Colony of Queensland; and at the examination held in September there were of that year 975 candidates, of whom 663 were men and 312 women. The University also initiated examinations of articled clerks in 1877, in compliance with a rule of the Supreme Court, and an examination of candidates for appointment in the Civil Service from an earlier date.

Benefactions.

Many donations have been made to the University for the use and reward of students. Among the first was a gift of £1,000 each from Mr. Thomas Barker and from Sir Edward Deas-Thomson, represented by lands which are now of twice that value. Many others followed, and about £42,000 has been presented up to t present date, exclusive of prizes, wh [illegible] een exhau [illegible] award, and irrespective [illegible] increas [illegible] About of this is still in suspense on account of intervening life estates to the widows of testators. Besides the above, a sum of £30,000 was left by the late Mr. Thomas Fisher for a library, and £6,000 has been given by the Hon. Sir William Macleay for a Curatorship of the Natural History Museum, presented by him to the University, and for which the Government have erected a suitable building. There have also been bequests of property other than money to the estimated value of £51,000 up to the present time.

Challis bequest.

Above all, the late Mr. John Henry Challis left his residuary estate, which is expected to reach £250,000 at the expiration of a term of accumulation imposed by the trustees, and now on the point of completion, but subject to certain annuities. Under this bequest an income of £7,200 a year is expected to commence early in 1890, and the Senate has determined to create certain new Chairs, and to give the testator's name and the support of this fund to certain other Chairs lately established, and for which the public endowment will not suffice. The Hovell and Challis bequests constitute the only resources of the University for actual education other than the public endowments.

Teaching staff.

The teaching staff consists of eight Professors, seventeen Lecturers, four Demonstrators and an Assistant in Physics, a Clinical Tutor in Medicine, four Evening Lecturers on Law, and four Lecturers under the Extension Scheme; and will in 1890 be increased by the addition of five Professors and three Lecturers under the Challis bequest.

Degrees conferred by the University.

Since its foundation the University of Sydney has conferred 733 degrees of various kinds, the highest number bestowed
one year being 51, in 1882. The number of students
lectures increased from 61 in 1877 to 250 matri-
403 non-matriculated students in 1888, whilst

the number of candidates who attended the public examinations has increased both in the senior and junior divisions, the former having advanced from 63 in 1877 to 141 in 1888, and the latter from 303 to 834.

Corresponding increases in the number of successful candidates at the public examinations have also taken place, as the following table will show:—

Number of Students, and Results of Examinations.

Year.	Number of students qualified for matriculation	Number of students attending lectures.		Public Examinations.			
		Matriculated.	Non-matriculated	Number of seniors who came up.	Number of juniors who came up.	Number of seniors who passed.	Number of juniors who passed.
1876	34	58	...	53	356	40	212
1877	23	61	...	63	303	38	135
1878	24	62	...	58	364	41	243
1879	58	83	...	76	333	64	247
1880	64	76	...	66	381	54	209
1881	80	81	...	48	392	36	231
1882	101	97	...	57	398	43	240
1883	85	128	...	57	473	36	299
1884	142	203	...	65	563	48	379
1885	115	203	...	84	645	73	440
1886	122	203	137	107	858	83	548
1887	132	215	329	125	834	87	562
1888	130	250	403	141	834	110	538

Revenue of University.

In the year 1888 the revenue from the Challis bequest, above mentioned, had not been available, owing to the term of accumulation. The expenditure of the University was therefore met out

Expenditure of University.

of the revenue accruing from students' fees, the Government aid, and sundry private sources, irrespectively of income for the express use or reward of students. The following table will show the yearly state of the finances of the University during the period from 1876 to 1888:—

Receipts and Expenditure of the University of Sydney.

Year.	Receipts.					Expenditure.
	Government aid.		Lecture fees.	Other sources.	Total.	
	Endowment.	Grants for apparatus or other special purposes.				
	£	£	£	£	£	£
1876	5,000	....	403	100	5,503	5,877
1877	5,000	....	334	100	5,434	5,434
1878	5,000	1,168	324	100	6,592	7,748
1879	5,000	114	476	100	5,690	5,746
1880	5,000	1,500	457	100	7,057	6,795
1881	5,000	1,000	706	100	6,806	6,227
1882	10,000	2,964	1,080	100	14,144	10,614
1883	12,000	2,343	1,266	120	15,729	15,381
1884	12,000	3,500	2,207	170	17,877	16,198
1885	12,000	4,500	2,479	385	19,364	20,094
1886	12,000	5,500	2,600	323	20,423	20,765
1887	12,000	4,918	2,819	308	20,045	20,811
1888	12,000	7,099	3,022	385	22,506	21,867

School of Medicine.

An extensive addition to the University's magnificent buildings has been made for the use of the School of Medicine. It provides the most complete accommodation for students desiring to follow the profession of medicine and surgery, and the Alfred Hospital, erected, as before stated, on the University rds them the necessary means of study. At the com- he year 1888 there were 56 undergraduates in

University laboratory.

the Medical School, a very fair number considering that this school was only established in 1883, and then commenced with only four students. A laboratory for the Department of Physics has also been recently erected, and is replete with every means of illustrating the teaching of physical science, and an equally complete laboratory and halls are in course of construction for the Department of Chemistry and its adjuncts. The prospects of the University of Sydney are excellent, and it cannot fail to prosper, and exert a most beneficial influence on the future of Australia. A Bill for founding an Affiliated College for Women is before Parliament, and has passed the Legislative Assembly, limiting the building endowment, however, to £5,000, but granting £500 a year for a Principal.

DENOMINATIONAL HIGH SCHOOLS AND COLLEGES.

Denominational Colleges.

All the principal religious bodies provide high schools and colleges where students may be educated according to the precepts of their various beliefs and prepared to compete for University honors, or the various professions which they may adopt. Evidence of the progress of superior denominational education in the Colony may be seen in the magnificent college buildings which surround the city, among which may be cited Newington College, the colleges of the Marist Brothers, and the Jesuit Fathers, at Hunter's Hill and Riverview, the old-established King's School at Parramatta, and a host of other first-class establishments erected under the patronage of the various religious bodies.

TECHNICAL EDUCATION.

Public attention was so strongly directed in the years which followed the great world exhibition of 1851, to the necessity of providing the artizan classes, and the people generally, with the means of obtaining a scientific knowledge of the various handicrafts, that technical schools sprang up in various parts of England, some being under the direct patronage of the State, while others were founded by the wealthy trade societies, or guilds, of the great English cities. The excellent results following the establishment of these schools could not fail to attract attention in the colonies, where a sound and practical knowledge of the manual arts is of paramount necessity. The foundation of the New South Wales Technical School was due in great measure to the efforts of a few gentlemen connected with the Sydney Mechanics' School of Arts, and as far back as 1873 it was decided to establish a Technical College affiliated to that institution, with the object of improving the scientific knowledge of Australian artizans. In the year 1878, a sum of £2,000 was granted by Parliament towards the organization of a Technical College, and for five years the work of the institution was carried on in connection with the School of Arts. In 1883, however, a board was appointed by the Government to take over its management, and the Technical College became thenceforth a State institution.

Foundation of Technical College.

The course of instruction, under the present constitution of the Technical College, comprises classes in agriculture, applied mechanics, arts, architecture, geology, chemistry, commercial economy, mathematics, elocution, pharmacy, physics, and domestic economy, and these classes are subdivided into sub-classes as may be warranted by circumstances.

Curriculum.

The college is open to students of both sexes, and, during 1888, nearly 500 female students attended for at least one term. The number of individual students in 1888 averaged 1,014 persons, and the total number who received instruction for at least one term was not less than 2,077. The average daily attendance was 772.

Number of students.

Branch technical schools have also been established in the northern, southern, and western districts of the Colony, and in 1888 these country classes had an average of 770 students enrolled, with an average attendance of 378.

Country classes.

Technical workshops have been fitted up in Sydney, where mechanical classes are held, and the teaching is illustrated by all the various tools and apparatus needed for the proper under-

Technical workshops.

standing of the different processes of each separate class of work. The Technical College is now fairly established, and its benefits are already being felt and appreciated, whilst the future has every promise of still greater usefulness.

Cost of technical education.

In 1888 the expenditure of the Board of Technical Education amounted to £16,997 received from the State, and £2,382 from pupils, in all £19,379. The means at the disposal of the board have not been sufficient for the establishment of country branches in every case where application has been made, but lecturers have been appointed to visit from time to time the principal country centres, and deliver lectures in mineralogy, geology, and agriculture. Proposals have also been made for the granting by the State of suitable areas, or reserves, for the purpose of establishing agricultural colleges and experimental farms, and the near future may see an extension of technical education in this direction.

REFORMATORIES.

Industrial Schools.

Besides these establishments the State maintains three reformatories or disciplinary institutions, two for girls—the Industrial School at Parramatta, and the Shaftesbury Reformatory, near South Head—and one for boys—the nautical school-ship Vernon. At the Parramatta institution the total enrolment of girls during the year was 145, and the number remaining on the 31st December last was 93, of whom 31 were under and 62 over 14 years of age. The cost of maintaining the school in 1888 amounted to £2,667. The Shaftesbury Reformatory is under the Minister of Justice. It has been in existence over ten years, and is designed for the reception of young women under sentence, a wise provision, for by this means are avoided the alternatives of sending the offenders to the institution at Parramatta (late at Biloela), where their influence and example might have a baneful effect on more youthful minds, or of consigning them to gaol. The want of a similar institution for criminal youths is much felt. It would indeed prove a boon in many cases, not only to the individuals themselves but to society at large, and might often be the turning point in a career just started on a downward course. The number of inmates at Shaftesbury at the close of 1888 was 28, and the expenditure during the year amounted to £813. On board the "Vernon" 404 boys were dealt with during the year, and the number remaining at the termination of 1888 was 209, of whom 123 were under 14 years and 86 over. The management of the training-ship is excellent, and its cost to the State during 1888 was £5,500. The results obtained in the three above-mentioned establishments have hitherto been of a very successful character, many children having been reclaimed from a depraved life, or rescued from unhappy surroundings, and turned out, after a course of some years' training, useful members of society.

The "Vernon" Training Ship

SCIENTIFIC SOCIETIES.

In a young country such as New South Wales, where most of the people are engaged in the development of its material resources, the existence of a leisured class, or one devoted to the pursuit of science, is hardly to be looked for. Nevertheless it is satisfactory to find that the higher aims of science are far from being neglected. As far back as the year 1821, a scientific society under the title of the Philosophical Society of Australasia was founded in Sydney, which, after experiencing many vicissitudes of fortune, was transformed in 1866 into, and afterwards incorporated under the title of, the Royal Society of New South Wales. The society is now in a flourishing condition, counting amongst its members some of the most eminent men in the Colony. Its object is to forward the advancement of science in Australia, and favour original research in all subjects of scientific, artistic, and philosophical interest, which may further the development of the resources of Australia, draw attention to its productions, or illustrate its natural history. The proceedings, published every year, include papers of the

Royal Society.

greatest interest on important scientific questions, especially those whose solution is of Australian interest.

Linnæan Society.

The study of the botany and natural history of Australia has attracted many enthusiastic students, and the Linnæan Society of New South Wales was also established for the special purpose of furthering the advancement of these particular sciences. The society is housed in a commodious building at Elizabeth Bay, one of the most beautiful spots near the city, and already possesses a library and museum. The society has been liberally endowed by the Hon. William Macleay, who, not content with being one of its most munificent supporters, is also an indefatigable worker in the field of science. The society's proceedings are published at regular intervals, and contain many valuable papers, together with excellent illustrations of objects of natural history.

Geographical Society.

In 1883 a third scientific society was formed in Sydney under the name of the Geographical Society of Australasia, with the view of promoting geographical research in a part of the world where much remains to be discovered. Branches of this society have been established in the cities of Melbourne, Brisbane, and Adelaide, and there is no lack of interest displayed in their proceedings. Among the first tasks undertaken by this Society was the despatch of an expedition to New Guinea, for which purpose aid was obtained from the various Colonial Governments. The expedition was under the command of Captain Charles Everill, and resulted in the acquisition of some very useful geographical and scientific knowledge of the island, the discovery of a large affluent of the Fly River being, perhaps, the most important achievement of the expedition.

Aid received by scientific societies.

The scientific societies just mentioned depend for support on private contributions, though, except in the case of the Linnæan Society, the Government grants them small sums annually in proportion to the income received from subscriptions, and has hitherto allowed their "Proceedings and Transactions" to be printed free of charge at the Government Printing Office.

Sydney Observatory.

Among the other institutions of a scientific and educational character which the Colony so liberally supports the Sydney Observatory is not the least important. Situated in a commanding position, it is admirably fitted for the purpose it is intended to serve. The present building was erected in 1856 at the instance of Sir William Denison, then Governor of the Colony, who took a great interest in scientific pursuits. The Government Astronomer has under him a complete staff of assistants, and during the year 1888 a sum of £4,136 was expended in connection with the institution. Meteorological observations have received special attention, as befits so important a subject in a country whose prosperity depends so much upon climate. When the present Astronomer took office in 1870, there were in the Colony only six stations, and observations on the climate, rainfall, and other meteorological phenomena were necessarily very limited in character. At the end of 1888 the number of stations had been increased to 907. Rain gauges have also been established at most of the sheep and cattle stations of the interior, with a result which is highly satisfactory. The light thrown on the true characteristics of the climate, especially of that part of the Colony remote from the sea coast, has tended to remove the notion long current as to its unfitness for agricultural as well as pastoral settlement.

Australian Museum.

The Australian Museum, which is the oldest institution of the kind in Australia, occupies a conspicuous site in the centre of Sydney, facing one of the principal parks. The collections contain carefully selected specimens of the principal objects of natural history found in kindred establishments, and also a most complete collection of zoological specimens of distinctly Australian character. The popularity of the institution is evinced by the increasing number of persons by whom it is visited. The Museum is open to the public every day, including Sunday, on which day the visitors are very numerous. The number of visitors during 1888 was 128,365, the daily average being 742 on Sundays, and 332 on week days. The expenses in connection with the institution amounted to £6,938, of which £1,930 was expended on account of purchases.

Free Public Library.

The Free Public Library was established on the 1st of October, 1869, when the building and books of the Australian Subscription Library were purchased by the Government. The books thus acquired formed the nucleus of the present library. The number of volumes originally purchased was about 16,000, and on the 31st December, 1888, they had increased to 82,343, including those in the lending branch, or lent to country libraries. The lending branch was established in 1877, to meet a growing public want, and, under the present system any person may, on the recommendation of a clergyman, magistrate, or other responsible person, obtain under certain simple regulations, the loan of any of the works on the shelves, free of charge. The scope of this institution was further extended by the introduction of a system by which country libraries and Mechanics' Institutes may obtain on loan works of a select kind, which in many instances would be too expensive for them to purchase on account of the slender funds at their disposal. Under this system, boxes are made up containing from 60 to 100 books, and forwarded to the country libraries on application, to be returned, or exchanged within four months. This system was initiated in August, 1883, and has been carried on successfully ever since. In the course of 1888, 85 boxes, containing 6,263 volumes, were forwarded to 60 institutions, some of them at considerable distances from the metropolis. The distance which these books were carried amounted to 34,458 miles, being on an average 405 miles for each box, an enormous distance, partly accounted for by the fact that some places to which books are sent were most readily accessible through other colonies. All the charges in connection with the despatch and return of books, insurance, &c., are defrayed by the State, and the system in vogue in New South Wales is the most liberal of its kind in existence.

Loan of books to country libraries.

Reference Library.

The reference department of the Free Public Library contains 55,504 volumes, and the lending branch 23,921. The country libraries were, on the 31st December, 1888, in possession of 2,918 volumes, lent under the system above mentioned, the total number of books and pamphlets, the property of this institution, being 82,343, classified as under:—

Synopsis of Classification.	Reference Department	Lending Branch.	Country Libraries.	Total.
Natural Philosophy, Science and the Arts	6,236	3,073	517	9,826
History, Chronology, Antiquities, and Mythology	5,322	2,629	751	8,702
Biography and Correspondence	3,729	3,155	753	7,637
Geography, Topography, Voyages and Travels, &c.	5,374	2,979	470	8,823
Periodical and Serial Literature......	14,633	......	......	14,633
Jurisprudence	2,564	705	49	3,318
Theology, Moral and Mental Philosophy, and Education	3,284	1,159	68	4,511
Poetry and drama........................	1,848	656	72	2,576
Miscellaneous Literature and Collected Works........................	4,426	*4,612	238	9,276
Works of Reference and Philology..	3,957	......	......	3,957
Patents	......	4,355	......	4,355
Duplicates and unbound volumes ...	1,319	......	......	1,319
Pamphlets	2,812	......	......	2,812
Books for the Blind	......	598	......	598
Total Number of Volumes ...	55,504	23,921	2,918	82,343

* Including 2136 volumes of Fiction.

Popularity of Library.

The popularity of the Free Public Library is clearly proved by the number of persons availing themselves of the privileges which it affords. The increase has been very regular, as will be seen in the following statement showing the number of visitors to the library, rising from 59,786, in 1870, to 168,685, in 1886, 65,255 of whom were visitors at the lending branch. The figures for 1886 are given by way of comparison with those of 1870, for, although the visitors to the lending branch in 1888 increased to 64,503, the total visitors only numbered 149,425, owing to the Reference Library being partly under reconstruction during the year.

1870	59,786
1871	60,165
1872	48,817
1873	76,659
1874 (eleven months)	57,962
1875	66,900
1876	72,724
1877 (Lending Branch first opened)	124,688*
1878	117,047
1879 (Exhibition open)	152,036
1880	134,462
1881	136,272
1882 (eleven months)	133,731
1883	155,431
1884 (eleven months)	161,877
1885	165,715
1886	168,685
1887	139,203*
1888	149,425

*Reference Library closed for three months, for moving.

Number of readers.

Although the lending branch contains but 23,921 volumes, the total number used during the year was not less than 81,115, and the number of persons availing themselves of the privilege of borrowing was 5,109, so that on an average each book was taken out from three to four times, and each person to whom a permit was granted used sixteen volumes during the year. As usual, a large portion of the work read was from fiction, each of the 2,136 novels in the branch having been used about twelve times during the year. The number of volumes of each class taken out was as follows:—

Classification of Books used.	No. of volumes used.
Natural Philosophy, Science, and Arts	9,432
History, Chronology, Antiquities, and Mythology	7,842
Biography and Correspondence	8,671
Geography, Travels, &c.	11,785
Jurisprudence	1,415
Mental and Moral Philosophy	2,859
Poetry and Drama	2,459
Miscellaneous Literature	12,505
Prose Fiction	24,083
Patents	64
Total	81,115

During 1886 and 1887 considerable extensions were made to the premises of the Free Public Library, which had become much too small for the accommodation of the public, and the proper housing of the books. It was at length decided to pull down the old building in Macquarie-street, and a contract was made about the middle of 1887 for rebuilding a large portion of the Library at a cost of £10,455. This work is still in progress, and when the new building is completed the establishment will be one of the most convenient in Australia.

Cost of maintaining library.

The institution forms a separate department, under the control of the Minister of Public Instruction, and its cost to the State, during 1888, was, in addition to the amount for building—

Salaries	£4,208	0	0
Maintenance	648	0	0
Purchase of Books	2,086	0	0
Total	£6,942	0	0

Schools of Art and Municipal Libraries.

Besides the Free Public Library of Sydney there are smaller libraries established in the principal population centres throughout the Colony. Returns have been received from 138 libraries, nearly all of which are in receipt of assistance from the State. These libraries may be broadly classed under two heads—Schools of Arts—receiving an annual subvention in proportion to the amount of monetary support accorded by the public; and Free Libraries established in connection with Municipalities. The former class are far the more numerous. Under the provisions of the Municipalities Act of 1867 any municipality may establish and maintain a Free Library, and, where such is done, the Council of the Municipality is entitled, for the purchase of books, the sum of £200 if the library is available for the use of a population of 1,000 or to £100 where the population to whom the library would be accessible reaches 300 persons. The number of volumes in the various public libraries, excluding the Free Public Library, is about 180,700. The cost of erecting buildings was £194,430, the ground in most cases having been granted by the State without charge. During 1888 the total income of these institutions was £24,681, of which sum the Government contributed £6,132.

National Art Gallery.

The National Art Gallery was first instituted in 1871 in connection with the New South Wales Academy of Art. It was reopened as the National Art Gallery in 1880, and is now situated in the Outer Domain, in a convenient and well-lighted building. It contains an excellent collection of paintings and statuary comprising some of the most famous works of the best modern artists of the old world, and includes several very valuable gifts from private persons. Like the other national institutions of New South Wales, the Gallery is open on Sundays as well as week days, and on the former and on public holidays the attendance is especially numerous. During 1888 it was visited by 195,050 persons, the average Sunday attendance being 1,565 and on week days 360. During 1888 the expenditure on this institution was as follows:—

	£
For works of art	4,050
For maintenance	187
For salaries	924
Total cost to the State	£5,161

Technological Museum.

The Technological Museum is also situated in the Outer Domain, in the Agricultural Hall, where it was removed on the destruction of the Garden Palace by fire. This museum was instituted at the close of 1879 on the initiative of the Trustees of the Australian Museum; but the whole collection of some 9,000 specimens was totally lost in 1882 by the fire above-mentioned. Strenuous efforts were at once made to replace the lost collection, and in December, 1883, the museum was again opened to the public, and now contains interesting and valuable series of specimens illustrating the various stages of many manufactures, and an excellent collection of animal and vegetable products. The popularity of this institution may be gathered from the fact that 38,614 persons visited it during 1888, the Sunday average being 240, and the week day 63. The cost to the State amounted to £3,875, distributed as follows:—

	£
For maintenance	1,542
For specimens, models, &c.	1,297
For salaries	1,036
Total	£3,875

RELIGION.

Equality of all religions

the eyes of the State all religions are equal in New South , but during the early days of the Colony such was not the New South Wales was originally essentially a Crown Colony, e Church establishment, as it existed in England, was naturally lanted to these shores. Ecclesiastical monopoly nevertheless ontinued for a short time, and the countenance and support State were eventually extended, during the governorship of chard Bourke, to the principal religious bodies which then d—the Anglicans, Roman Catholics, Presbyterians, and Wes- Methodists. To the clergy of each of these denominations vernment granted what has usually been denominated State hich continued long after the old political system had passed and had been replaced by Responsible Government. In however, an Act was passed limiting future payments to the then actually in receipt of State aid. In the year following ssing of this Act the claims on the Government amounted to 72, and were thus distributed :—

State aid to religion.

Church of England	£17,967
Roman Catholic Church	8,748
Presbyterians	2,873
Wesleyan Methodists	2,784

ar by year the sum payable has been lessening, owing chiefly deaths of clergymen in receipt of State aid, so that in 1888 ayment by the State was £9,992, distributed as follows :—

Church of England	£5,790
Roman Catholic Church	2,600
Presbyterians	702
Wesleyan Methodists	900

Payments on account of State aid.

e payments to the clergy of different denominations are below for each year since 1863. It will be observed that veral years the amounts paid were less than in succeeding years. This anomaly is due to the temporary stoppage of the stipends of clergymen who were absent from the Colony.

Amounts paid to the Clergy since the Abolition of State Aid to Religion.

Year.	Church of England.	Roman Catholic Church.	Presbyterian.	Wesleyan Methodist.	Total—All denominations.
	£	£	£	£	£
1863	17,967	8,748	2,873	2,784	32,372
1864	17,519	8,234	2,614	1,179	29,546
1865	14,111	7,430	3,090	1,572	26,203
1866	13,977	7,446	2,852	1,572	25,847
1867	13,255	7,275	2,852	1,572	24,954
1868	12,767	7,083	2,847	1,965	24,662
1869	12,370	6,796	2,487	1,573	23,226
1870	12,386	6,583	2,180	1,573	22,722
1871	10,994	6,416	1,942	1,573	20,925
1872	12,187	6,034	1,822	1,484	21,527
1873	11,237	5,804	1,702	1,372	20,115
1874	11,224	5,963	1,560	1,372	20,119
1875	10,725	5,608	1,626	1,372	19,331
1876	10,213	5,300	1,778	1,029	18,320
1877	9,803	5,024	1,702	1,716	18,245
1878	9,180	4,550	1,702	1,029	16,461
1879	8,238	4,357	1,702	1,372	15,689
1880	7,739	3,892	1,702	1,716	15,049
1881	7,412	3,729	1,689	992	13,822
1882	6,558	3,487	1,636	1,455	13,136
1883	6,082	3,246	1,407	1,324	12,059
1884	5,975	3,025	1,177	1,222	11,399
1885	6,041	3,000	1,052	1,136	11,229
1886	5,790	3,000	902	1,050	10,742
1887	5,790	2,800	702	900	10,192
1888	5,790	2,600	702	900	9,992

The number of persons entitled to State aid during 1888 was 59—33 Church of England, 15 Roman Catholics, 5 Presbyterians, and 6 Wesleyan Methodists.

Adherents of each religion.

The number of members of each religious body was estimated at the census of 1881, and the relative proportions of each of the larger denominations were found to differ but slightly from those shown by the previous census. Distributing the population on the basis of the census of 1881, the estimated number of adherents to each of the denominations, with the clergy registered for the celebration of marriages, was during 1888 as follows.

Denomination.	Clergy.	Adherents.	Proportion of adherents to clergy.
of England	347	494,011	1,424
Catholic	301	299,990	997
erian	151	104,882	694
n, and other Methodist	174	93,159	536
ational	61	20,738	340
	33	10,641	322
rotestant	39	21,492	537
n	1	1,303	1,303
	4	4,777	1,592
	......	34,747	....
Total	1,111	1,085,740	977

Church attendance.

number of persons attending Divine Service on Sundays d 310,859 for the year 1888. This number represents the nce of adults only; if school children were included the r would be 423,150 or 48 per cent. of the persons over seven f age. When the sparseness of the population in some of the country is considered, the church attendance will very large, and though apparently less than found in the of Victoria, is proportionately much greater than in England.

figures showing the attendance at Divine Service on ys for each of the principal denominations are given here Sunday school children are not included.

Denomination.	Number of distinct persons attending Sunday services.
of England	78,921
Catholic	84,619
terian	30,868
an Methodist	52,016
ethodists	7,878
gationalist	12,467
	6,163
on Army	34,475
	3,452
Total	310,859

Church of England.

Church of England is the largest religious denomination in lony, whether judged by the number of professed adherents, mber of clergy, or the number of buildings used for divine service. During the year 1888 there were 599 churches belonging to this denomination and 151 school-houses used for public worship accommodating 116,077 persons; there were also 766 public buildings or dwellings; the attendance of distinct persons counting only adults was 78,921. The number of clergy registered under Acts 19 Vic. No. 30 and 34 of the celebration for marriages was 347. The Church of England in the colony is governed by a metropolitan who is also primate of Australia, and five other Bishops whose sees are Bathurst, Goulburn, Newcastle, Grafton and Armidale, and Riverina.

Roman Catholic Church.

The Roman Catholic Church is presided over by the Cardinal Archbishop of Sydney under whom are the suffragan bishops of Bathurst, Goulburn, Grafton, Maitland, Armidale, and Wilcannia, the whole colony forming an ecclesiastical province. There are 301 priests licensed to celebrate marriages. The number of Roman Catholic Churches properly so called was 391; besides these there were 47 school-houses and 733 public buildings or dwellings used for Divine Service. The accommodation afforded by the churches amounted to about 97,816 sittings and the attendance on Sundays averaged 84,619.

Presbyterian Church.

The various branches of the Presbyterian Church in the colony have 290 churches and 61 schools used for public worship; there were also 423 public buildings or dwellings occasionally used for the same purpose in 1888. The number of ministers was 151, of whom 134 were connected with the Presbyterian Church of New South Wales, and 10 with the Synod of Eastern Australia. The accommodation provided in churches was 53,687 sittings and the attendance numbered about 30,868, not including Sunday-school children.

Wesleyan Methodists.

The Wesleyan Methodist communion is divided into seven districts. Throughout the colony there are 357 churches and 40 other preaching places with sittings, in the former to the number of 54,857, and in the latter 19,033, in all 73,890. The denomination owns also 55 school buildings and 72 parsonages and has in its service 135 regular clergy and 450 local preachers, besides whom there are 10 ministers licensed to marry, but who are not in active work. The number of church members is said to be 7,588, of whom 1,384 are communicants, but the attendance of adherents at Divine Service is not less than 52,016, not including children.

The Primitive Methodists and United Methodists have 78 churches and 29 clergy; the accommodation provided will seat 13,780 persons, the attendance at Divine Service is about 7,878.

Congregationalists.

The Congregational Church has 61 churches as well as 51 public buildings or dwellings used for worship; the sittings provided will accommodate 19,870 persons. The clergy licensed to celebrate marriages number 61 and the attendance at Divine Service on Sundays averages about 12,467.

Baptists.

The various Baptist Churches in the colony have 33 licensed ministers with 38 churches and 55 school-houses or other buildings devoted to public worship; the Sunday attendance averages 6,163 persons, but there is sitting accommodation for 11,347.

Salvation Army.

The Salvation Army has only four officers licensed to celebrate marriages, but has 40 buildings used for service, accommodating 31,970 persons. The number of persons attending Sunday service is stated by the authorities to be 34,475; this number probably includes persons at open air meetings.

Other Denominations.

Besides those above enumerated there are other distinct religious bodies, for the most part Protestant denominations, with clergy licensed by the State to celebrate marriages. The number of clergy ministering to these was 40; the churches, school-houses, and public buildings used for Divine Service numbered 69 and the attendance on Sundays was about 3,452 persons.

The number of churches belonging to all faiths was 1,896, in addition to which there were 355 school-houses and 2,509 dwellings or public buildings used for public worship. The accommodation provided would seat about 429,821 persons.

Sunday-schools.

Nearly all the religious bodies maintain Sunday-schools. The attendance of children at these schools shows a considerable

Sunday-schools maintained by all denominations.

increase during the past three years. Some part of this increase is merely apparent, and is due to the greater completeness in the returns, but no small portion of the improved attendance results from the extension of school accommodation in various parts of the country. The attendance of children at the Sunday-schools of the leading denominations, with the number of schools and teachers during 1888, was—

Denomination.	No. of schools.	Number of teachers.			Average number of scholars.		
		Male.	Female.	Total.	Male.	Female.	Total.
Church of England...	560	1,164	2,406	3,570	16,166	20,313	36,479
Roman Catholic	403	312	1,139	1,451	10,419	13,568	23,987
Presbyterian	220	540	869	1,409	5,155	6,214	11,369
Wesleyan Methodist	323	1,338	1,463	2,801	10,370	11,907	22,277
Other Methodists.....	73	456	380	836	3,328	3,721	7,049
Congregational	68	357	395	752	3,253	3,855	7,108
Baptist	36	142	152	294	1,032	1,256	2,288
Other denominations	41	86	68	154	833	901	1,734
Total	1,724	4,395	6,872	11,267	50,556	61,735	112,291

Attendance at Sunday-schools

The attendance given above is extremely high, amounting as it does to nearly 50 per cent. of the total children between the ages of 7 and 15 years, at which ages children generally attend Sunday-schools. The number of Sunday-schools and teachers, and the attendance during each of the past ten years, was—

Year.	Number of schools.	Number of teachers.	Average attendance.		
			Male.	Female.	Total.
1879	1,285	8,491	31,802	37,710	69,512
1880	1,340	9,027	33,304	39,089	72,393
1881	1,405	9,289	34,950	40,722	75,672
1882	1,318	9,190	34,393	41,334	75,727
1883	1,441	9,793	35,205	42,610	77,815
1884	1,461	9,426	35,883	43,202	79,085
1885	1,513	9,986	37,991	46,531	84,522
1886	1,596	10,759	47,307	56,354	103,661
1887	1,614	10,749	48,333	58,999	107,332
1888	1,724	11,267	50,556	61,735	112,291

PART XX.

Defence.

Imperial garrison.

NEW South Wales was garrisoned with British troops from the time of its foundation as a colony until the year 1870. r part of the years 1870 and 1871 the Colony was without ular troops, its defence being entirely in the hands of the unteer force. In 1871 a local regular defence force was enrolled, aprising one battery of artillery and two companies of foot, latter, however, were disbanded in the following year. The manent artillery was strengthened by a second battery in 1876, l by a third in 1877. To supplement the Imperial troops in stralia a volunteer force was enrolled in 1854, Great Britain ng then at war with Russia. The Act authorizing the estab- ment of the force was 18 Vic. No. 8. The original strength this corps was one troop of cavalry, one battery of artillery, l six companies of foot, but with the termination of the imean war this force practically ceased to exist. A few years er in 1860 the volunteer movement was revived, and a second ce enrolled, consisting of one troop of mounted rifles, three teries of artillery—two stationed at Sydney, and one at New- tle—and twenty companies of infantry, fourteen of which were ruited from Sydney and its suburbs, and six from the country tricts. The total strength of all arms was about 1,700 men. 1868 the force was reorganized under the Volunteer Regulation t, passed towards the close of the previous year. In 1873 a ther reorganization of the volunteer troops of the Colony took ce upon a plan drawn up by Sir William Jervois, and in 1885 additional force of reserves was enrolled.

Volunteer movement.

Land forces of the Colony.

The land forces of the Colony comprise three distinct branches, the Permanent Force, Volunteers, and Reserves. The Permanent Force consists of artillery, submarine miners, and mounted infantry; the Volunteers consist of artillery, engineers, submarine miners, infantry, mounted infantry, naval brigade, and naval artillery; while the Reserves, which are also volunteer corps, comprise cavalry, artillery, and infantry.

Permanent Artillery.

The Permanent Force comprises a general staff of 10 commissioned and 14 non-commissioned officers, and 13 commissioned officers of artillery, 33 non-commissioned and 378 rank and file. There is also 1 commissioned officer in the submarine miners, 1 warrant officer, and 12 rank and file, while the permanent mounted infantry consists of one captain, and 29 rank and file, the whole force thus numbering 492. The rates of pay of the regular artillery, apart from the permanent staff, were for the year 1888:—Colonel, £500; lieutenant-colonel, £450; majors, £383; captains, £256; lieutenants, £238; staff-surgeon, £350; surgeon, Newcastle, £75. Sergeants from 4s. to 10s. per diem; corporals, 3s. 4d. per diem; bombardiers, 3s. 2d. per diem; trumpeters, 2s. 3d. per diem; master gunners, 7s. to 10s. per diem; gunners, 2s. 3d. per diem; the permanent mounted infantry and submarine miners are paid on the same scale as the artillery, and the total cost was £45,972. The artillery man the batteries guarding the harbours of Sydney, Botany Bay, and Newcastle, mount guard at the vice-regal residence, and perform such other duties as usually appertain to a garrison. The troops are a fine body of men, the minimum height at which recruits will be accepted is 5ft. 6in.

Volunteer Force.

As already stated, the Act authorizing the establishment of a volunteer force was assented to on the 24th July, 1854, and the Act continued with various modifications in operation until 1878, when the land forces of the Colony were remodelled and further alterations took place in 1888. The volunteer force was retained, a system of payment was introduced in lieu of the indirect uneration by a land grant of 50 acres for five years continuous iency, which obtained previous to 1878. The ages at which uits for the volunteer force are taken are between 18 and 40 rs. The volunteer force of the Colony consists of five arms ddition to the permanent staff, and the total strength of the e is 2,930 men of all ranks. The staff numbers 133, of whom belong to the permanent staff, 5 are medical officers, 62 lical Staff Corps, and 4 honorary chaplains.

Artillery.

he artillery is distributed in five districts, the strength of each g—

Sydney	264
Newcastle	57
Wollongong	51
Bulli	47
Bega	28
	447

Engineers.

he engineers are located in Sydney, and number 96 men of ranks, viz., 5 commissioned officers, 15 non-commissioned ers and buglers, and 76 sappers. The submarine miners are located in Sydney; they comprise 9 commissioned officers, non-commissioned officers and buglers, and 78 privates, or 103 ll ranks.

Infantry.

he infantry forces are distributed over four districts, the ngth of each district being—

Sydney	554
Western	605
Northern	536
Southern	289
	1,984

his arm comprises 106 commissioned officers, 253 non-comioned officers, 12 non-commissioned officers on the permanent , and 1,613 privates and buglers.

The mounted infantry were only established in 1888, an number 6 commissioned officers and 161 privates.

Efficiency—how secured.

To rank as an efficient, every volunteer must serve for nine da continuously in camp, and for three detached days during t year. The artillery are also required to attend 16 half-day parad including shot practice. The engineers must attend, in additi to the continuous training, 12 half-day parades, and 10 nig drills; the submarine miners, 22 half-day parades, and the infant 13 half-day parades and a course of musketry. Pay is granted all ranks according to a sliding scale. Gunners, sappers, a privates receive 10s. for each day of continuous training, and like sum for each detached day's parade; for a half-day parade is paid, and for a night parade 2s. In addition to these su every volunteer passing through the musketry course, and qu fying as a marksman, is granted 15s.; if as a first-class shot, 10 and if as a second-class shot, 5s.; with a bonus of £2 if he quali at the end of the year as an efficient.

Volunteer reserves.

Besides the Volunteer force described above, which is partia paid, there is an unpaid Volunteer reserve, with a strength 1,278 men of all ranks. The reserve force comprises three ar the strength of each of which is—

Cavalry	326
Artillery	93
Infantry	859
	1,278

Cavalry

The cavalry provide their own horses and equipment, th uniform and arms being provided by the Government. T metropolitan force is armed with lances, while the country co are equipped as ordinary light cavalry. The force is distribu through three districts:—

Sydney	47
Southern District	180
Northern District	99
	326

The artillery reserves are stationed at Sydney only, and onsist of four companies comprising 93 men. The infantry is istributed through four districts, the strength of each district eing :—

Sydney	303
Southern	278
Western	60
Northern	218
	859

In 1888 a system of rifle companies was established, and there are now 50 companies, comprising 1,431 men, distributed through the Colony.

Naval Brigade.

The naval brigade dates back to 1863, and is intended to operate chiefly for coastal defence, but as at present constituted it is a light artillery land force. Its strength is 342 men of all ranks, 285 stationed in Sydney and 57 in Newcastle.

Naval Volunteer Artillery.

Besides the reserves above enumerated there is a force called the Naval Volunteer Artillery, which was enrolled in 1882. Its duty is to man and work any gunboat available for this service, or serve as field artillery if other service is not available. The officers and men provide their own uniforms, while the Government supply arms, and allow an annual subvention of £770 for military instruction and ordinary expenses incidental to the working of such a corps. The strength is 134 men of all ranks.

The reserve infantry is provided with arms and equipment, and each company is granted an allowance for incidental expenses, &c.

Summary of Forces.

The land forces of the Colony comprise 6,131 men, of whom 492 form the general staff and permanent artillery 2,930 volunteers, who are partially paid, and 2,709 reserves. The naval forces comprise 476 men, of which 342 form the naval brigade, and 134 the naval volunteer artillery. Dividing the force in the various arms the strength of each is :—

General and Permanent Staff	114
Cavalry	325
Artillery	960
Engineers	96
Submarine Miners	117
Mounted Infantry	197
Infantry	2,824
Rifle Companies	1,431
Medical Staff Corps	67
Naval Brigade	342
Naval Artillery Volunteers	134
	6,607

Cost of Defence.

The expenditure by the State on defence works and the Pe manent and Volunteer Military forces, was distributed follows :—

	£
General Staff	5,304
Military Instructors	2,520
Artillery Force	35,965
Permanent Submarine Miners	264
Permanent Mounted Infantry	1,279
Works of Defence	1,718
Volunteer Force	77,741
Naval Brigade	5,997
Naval Artillery Volunteers	796
Training Ship "Wolverene"	2,278
Torpedo Defence	640
Total	£134,502

The artillery guns possessed by the Colony number 189, which 125 are mounted and 64 dismounted, 23 are of brass, an 166 of iron. The calibre of guns varies from 3-inch, being th of the 7 and 9 pounders, up to 10-inch the calibre of the 25-t muzzle-loading rifled guns mounted for harbour defence.

Naval Station.

New South Wales has no navy of its own, the defence of coast being in the hands of the British ships on the Australi station. Sydney is the headquarters of the fleet, and ranks as first-class naval station ; extensive repairing yards and sto houses are being constructed for the accommodation of the sh of war. There are stationed in these waters eleven vessels, wh armament, &c., are as follows :—

Imperial War Vessels on Station.

Name.	Class.	Material of hull.	Displacement.	Indicated horse-power.	Draught of water extreme.	Length.	Beam.	Armour.	Armament.		Speed.	Coal endurance.	
									Guns.	Fish torpedo dischargers.		Coal that can be carried in bunkers.	Distance that can be steamed at 10 knots' speed.
			tons.		ft. in.	ft. in.	ft. in.				knots.	tons.	knots.
Orlando	Armoured cruiser, 2 screws.	Steel	5,600	8,500	24 10	326 0	56 0	Armoured belt at water-line, 10 in.; armoured deck, 3 in.; conning tower, 12 in.	2 92-in. 22-ton B.L.R 10 6-in. 5-ton B.L.R. 16 Q.F., 7 M.	2	19·2	862	7,000
Calliope	Corvette (deck protected amidships).	Steel, wood, and copper sheathed.	2,770	4,020	19 11	235 0	44 6	....	4 6-in. 5-ton B.L.R., 12 5-in. 36-cwt. B.L.R., 10 M., 2 L.	21 Car.	13·75	550	4,000
Royalist......	Corvette (partial deck protected).	Composite.	1,420	1,400	15 9	200 0	38 0	....	2 6-in. 81 cwt. B.L.R. 10 5-in. 38-cwt. B.L.R., 4 M., 1 L.	....	13·00	400	6,000
*Egeria	Sloop	Composite.	940	1,010	14 3	160 0	31 4	....	4 20-pdr. B.L.R., 2 M., 1 L.	....	11·30	100	1,000
†* Myrmidon	Sloop	Wood	877	720	12 9	196 0	27 6	....	4 20 pdr. B.L.R., 2 M.	....	11·00	122	1,000
Opal	Corvette	Composite.	2,120	2,190	18 7	220 0	40 0	....	12 64-pdr. M.L.R., 6 M., 2 L.	....	13·13	270	2,250
Rapid	Corvette (partial deck protected).	Composite.	1,420	1,400	15 9	200 0	38 0	....	2 6-in. 81-cwt. B.L.R. 10 5-in. 38-cwt. B.L.R., 4 M., 1 L.	....	13·00	400	6,000
Lizard	Gunboat	Composite.	720	1,000	12 6	165 0	20 0	....	6 4-in. B.L.R. (25-cwt.), 4 M.	....	13·00	100	3,000
Swinger	Gunboat	Composite.	430	520	11 6	128 0	22 6	....	1 64-pdr., 2 20-pdr. B.L.R. 2 M.	....	10·00	30	500
Raven	Gunboat	Composite.	465	360	10 1	125 0	23 6	....	2 64-pr., 2 20-pdr. B.L.R., 2 M.	....	10·50	40	700
*Dart	Yacht	Wood	523	200	14 6	133 0	25 2	....	2 9-pdr., M.L., 2 M.	....	8·5	30	....

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* Surveying service. M.L.R., Muzzle-loading rifled guns; Q.F., Quick-firing guns; M., Machine guns; L., Light guns under 15 cwt.; B.L.R., Breech-loading rifled guns; Car., Carriages; L.C. & F. Tu., Launching carriages or fixed tubes for Whitehead torpedoes. † To be relieved by H.M.S. Rambler.

[illegible] increase the strength of the Au-
[illegible] has been entered into by
[illegible] Queensland, for the payment
[illegible] the maintenance of the fleet. The total
[illegible] the colonies amounts to £91,000 per
[illegible] New South Wales would
[illegible] the provision of the "Austral-
[illegible] was assented to on 20th December,
[illegible] the following basis:—The
[illegible] torpedo gunboats, as
[illegible] and "Rattlesnake"
[illegible] cruisers and one gun-
[illegible] the remainder being held in
[illegible] commission whenever
[illegible] The agreement is to be for
[illegible] at the end of any
[illegible] provided two years' notice
[illegible] by the British
[illegible] colonies will pay the
[illegible] per cent., provided
[illegible] The colonies are also to
[illegible] mentioned above. On
[illegible] vessels will remain the
[illegible] The strength of the fleet
[illegible] maintained. The vessels
[illegible] Britain and the colonies
[illegible] The Australasian squadron will be
[illegible] Australian Station, whose
[illegible] is provided for him

[illegible] erected at various important
[illegible] of defence, and is deemed
[illegible] the southern defence of
[illegible] Newcastle, the great coal
[illegible] the land defences of Sydney
[illegible] two torpedo boats of the first-
[illegible] by the Naval Artillery Volunteers
[illegible]

PART XXI.

Local Government.

Municipalities Act.

Area incorporated.

PRIOR to the year 1842 municipal institutions did not exist in the Colony. In the year named, however, the city of Sydney was granted municipal government, the first election for aldermen and councillors taking place on the 9th November, and the boundaries then assigned to the city are those which it now holds. The necessity for an extension of the system of municipal government to some of the suburbs of Sydney and to the chief country towns soon became apparent; but it was not until 1858 that a comprehensive measure was passed. Under the provisions of this Act thirty-five districts were incorporated, all of which exist to this day. In 1867 the original Act was amended, and the present enactment, known as the Municipalities Act of 1867, became law. The terms of the Act are extremely liberal, but no provision is made for the compulsory incorporation of any district, however populous. Under the Act of 1867 it is provided that any contiguous districts having an area of not more than 9 square miles, and a population of not less than 1,000, may be incorporated as boroughs; and districts whose area does not exceed 50 square miles, and whose population numbers not less than 500 persons, may be formed into municipal districts. Under the operation of this and former Acts, 131 districts have been incorporated, 59 being entitled boroughs, and 72 municipal districts, the other incorporated district being Sydney, which is styled a municipality. The area thus incorporated is not large, embracing only 2,168 square miles, equal to 0·70 per cent. or $\frac{1}{143}$ of the total area of the Colony. The population of New South Wales at the close of 1888 was 1,085,740 or 3·49 to the square mile; in the municipalities there was a population of 626,906, giving an average density of 289 persons per square mile or 83 times that of the rest of the Colony. The estimated value of land and houses may be approximately stated at £238,285,095; of this sum £120,285,095 or 50½ per cent. belong to the incorporated districts of the Colony, and £118,000,000 or 49½ per cent. in the other districts. In the value of lands just given the waste lands of the state are of course not included.

The powers and privileges of the municipalities, as set forth by the several Acts, are very extensive. Apart from the ordinary work of maintaining the thoroughfares, the corporations are entitled to construct sewerage, water supply, and gas-works, and to levy rates in respect to these; to make and enforce by-laws for the maintenance of public health and the abatement of nuisances; to establish free public libraries and free infant schools, as well as to perform many other acts for the material and sanitary advantage of their residents.

The councils are empowered to raise revenue by rates amounting to not more than 1s. in the £ for ordinary purposes, and not more than 1s. in the £ for special purposes. The property in a municipality is valued or assessed every year, and for this purpose assessors are appointed. After the valuation has been made, a rate is struck upon the annual value of all property liable to assessment, viz., upon nine-tenths of the fair average rental of all buildings and cultivated lands, or lands which are, or have been, let for pastoral, mining, or other purposes, whether such land or buildings be actually in occupation or not, and upon 5 per cent. of the capital value of the fee-simple of all unimproved land The rate for general purposes is ordinarily 1s. in the £ on th assessed annual value, while the special rates, where such exist vary from 1d. to 1s. in the £.

Rates under Country Towns Water and Sewerage Act of 1880.

Municipalities which have availed themselves of the provision of the Country Towns Water and Sewerage Act of 1880, ar empowered, under clause 13 of the said Act, to levy an addition rate not exceeding a maximum of 5 per cent. on the assessed valu of land and tenements. Such maximum rate is at present levie in the municipalities of Wagga Wagga and Bathurst, the rat payers of which towns are under a total contribution of 2s. 4d. and Albury, where they are charged 2s. 3d. in the £ on tl assessed value of their properties. The following table shov the present condition of the Boroughs and Municipal Distric of New South Wales, and the extent of their population and wealt

Municipalities.	Estimated number of Dwellings.	Estimated Population.	Amount of Rate levied in the Pound.		Capital Value of Unimproved Lands.	Annual Value of Improved Lands, Buildings, &c.	Total Annual Value of all Property.	Estimated Capital Value of all Property in Municipalities.	Total extent of Roads and Streets.		Estimated Value of made Roads and Streets.
			Ordinary Rate.	Special Rate.					Made.	Unmade.	
	No.	No.	s. d.	s. d.	£	£	£	£	miles.	miles.	£
City of Sydney ..	21,437	128,158	1 6	0 6	No estimate.	2,228,817	2,228,817	44,576,240	110	....	750,000
Suburbs	51,315	247,597	1 0	2d. to 10d.	10,245,045	2,474,809	2,987,061	45,635,138	699	636	1,662,787
Total Metropolis..	72,752	375,755	{ 1 0 { 1 6	2d. to 10d.	*10,245,045	4,703,626	5,215,878	90,211,478	809	636	2,412,787
Country	49,521	251,151	9d. to 1s.	1d. to 1s. 4d.	3,549,904	1,972,071	2,149,566	30,073,617	1,744	1,831	1,378,593
Total Colony	122,273	626,906	9d. to 1s.	1d. to 1s. 4d.	*13,794,949	6,675,697	7,365,444	120,285,095	2,553	2,467	3,791,380

* Not including City of Sydney.

Annual and Capital Value of Property in Boroughs and Municipalities.

Year.	City of Sydney.	Suburbs of Sydney.	Country Municipalities.	Total.
	£	£	£	£
882—Annual value	1,655,952	1,314,919	1,064,560	4,035,431
Capital value	29,807,140	19,749,107	11,697,199	61,253,446
883—Annual value	1,838,642	1,449,947	1,266,502	4,555,091
Capital value	36,772,840	20,676,070	14,425,195	71,874,105
84—Annual value	1,979,772	1,690,109	1,524,218	5,194,099
Capital value	39,595,440	23,046,854	17,661,067	80,303,361
85—Annual value	2,035,235	1,935,884	1,713,578	5,684,697
Capital value	40,704,700	29,410,787	21,828,805	91,944,292
86—Annual value	2,096,476	2,289,685	1,727,951	6,114,112
Capital value	41,929,520	32,960,620	21,657,828	96,547,968
87—Annual value	2,131,026	2,501,904	1,895,591	6,528,521
Capital value	42,529,525	36,644,629	26,699,331	105,873,485
88—Annual value	2,228,817	2,987,061	2,149,566	7,365,444
Capital value	44,576,340	45,635,138	30,073,617	120,285,095

Increase in six years.

The increase shown in this table is very considerable. From 882 to 1888 the annual value has risen from £4,035,431 to 7,365,444, or at the rate of 10·56 per cent. per annum, while the pital value has advanced from £61,253,446 to £120,285,095, or t the rate of 11·86 per cent. per annum. Part of this increase is ue to an increase in the number of districts incorporated; but hen an allowance is made for these it will still be found that the crease has been very satisfactory.

The amount of increase during the past six years will be found n the following table:—

Municipalities.	Increased annual value during six years.		Increased capital value during six years.	
	Total.	Per cent.	Total.	Per cent.
	£		£	
ity of Sydney	572,865	34·59	14,769,200	49·54
burbs of Sydney.........	1,672,142	127·16	25,886,031	131·07
untry Municipalities..	1,085,006	101·92	18,376,418	157·16
Total...............	3,330,013	82·51	59,031,649	96·37

Position of Sydney amongst cities of the Empire.

The growth of the city and suburbs has been marvellous, and Sydney now stands as the third city of the British Empire, as estimated by the annual value of its ratable property, Melbourne ranking second. The annual value of property in Sydney during 1887 was £4,632,930, and in 1888, £5,215,878; the annual value of Melbourne and suburbs during 1887 was £4,128,895, but for 1888 this value is returned at the extraordinary sum of £5,322,948. The following are the annual values of the principal British cities for 1887:—

London (Metropolitan Board of Works)	£30,458,005	Leeds	£1,177,636
Liverpool	3,396,864	Sheffield	1,071,668
Glasgow	3,363,964	Bristol	983,558
Manchester and Salford	3,216,123	Bradford	965,231
Birmingham	1,759,273	Nottingham	917,056
		Newcastle-on-Tyne	823,338

Capital value of each municipality.

The capital value of ratable property in all municipalities, and the assessed annual value, together with the amount of income, and other particulars are shown in the following table.

Capital and Annual Value of Ratable Property and Income of Boroughs and Municipal Districts during 1888.

Incorporated Districts.	Estimated Capital Value of Ratable Property.	Annual Value of Houses and Improved Lands.	Revenue, exclusive of Loans.	Outstanding Loans.	Extent of Roads and Streets.	
					Made.	Unmade.
METROPOLITAN.						
	£	£	£	£	Miles.	Miles.
Municipality of Sydney	44,576,340	2,228,817	263,678	735,000	110	......
Suburban Municipalities.						
Alexandria	953,000	44,500	5,478	13,500	12½	11¼
Ashfield	2,500,000	124,806	10,426	15,000	26	8
Balmain	3,438,784	214,924	17,296	63,000	44	6
Botany	285,675	20,414	303	......	6¼	10½
Botany North	91,000	6,000	293	......	¼	12
Burwood	1,121,200	83,725	8,489	25,000	24¼	5¾
Camperdown	692,336	44,280	4,084	17,000	11	3
Canterbury	481,189*	38,319*	3,368†	......	40†	35†
Concord	499,000	19,913	2,544	3,000	9¼	9¾
Darlington	350,137	27,211	1,932	5,000	4	......
Five Dock	630,000*	28,303*	2,128†	6,000	25†	36†
Glebe	2,024,150	161,932	13,843	30,000	23	3
Hunter's Hill	681,518	25,742	2,054	5,800	12	30

* Estimate. † Figures for last year have been inserted.

rated Districts.	Estimated Capital Value of Ratable Property.	Annual Value of Houses and Improved Lands.	Revenue, exclusive of Loans.	Outstanding Loans.	Extent of Roads and Streets.	
					Made.	Unmade.
	Suburban Municipalities—continued.					
	£	£	£	£	Miles.	Miles.
	916,933	16,050	3,281	......	24	75
	341,365*	34,041*	4,700†	.. ...	12†	51†
	1,684,997	99,127	8,412	41,000	52	14
Town	627,151	34,911	3,732	5,700	5	1¼
	1,171,135	47,394	6,784	16,000	......‡	......‡
le	1,130,000	113,000	10,100	15,000	90	30
	1,780,550	153,166	12,669	30,000	14½	6½
	3,600,000	182,052	14,638	29,500	19	1
	1,633,305	106,830	10,308	14,500	35	15
	2,173,600	83,285	8,264	20,450	33	52
	2,300,000	160,000	17,652	50,000	20	3
	770,000	26,044	3,566	13,000	21	20
ds	3,079,950	108,674	7,212	5,000	29	59
ds East	1,330,000	74,826	7,239	23,000	......‡	......‡
	1,353,259	31,232	2,993	10,000	9	4
	691,796	24,356	4,849	5,000	4	16
	751,181	39,533	3,827	9,000	5½	3½
	938,612	57,113	6,026	15,000	14½	10
	1,657,395	98,502	9,740	20,000	19	31
y, North	1,415,120	19,733	3,402	5,000	33	30
	2,540,800	124,871	12,424	......	22	44
d Lands	....	512,252	......	......	......	......
Suburbs ...... £	45,635,138	2,987,061	234,056	510,450	699	636½
Metropolitan £	90,211,478	5,215,878	497,734	1,245,450	809	636½
	Country Municipalities.					
n	210,400	7,500	879	2,000	1¾	1¾
	435,000	39,620	6,570	...	24	41¾
	250,000	23,285	1,796	3,800	20	29½
	108,800	5,286	801	700	8	14
	95,360	7,337	757	...	3	47¾
	967,000	66,540	10,702	20,997	25	32
	317,952	17,192	2,608	8,000	14	12
	95,220	8,784	1,184	...	8½	8½
	421,199*	33,847*	2,314†	2,000†	5†	5†
	254,146	15,372	1,803	3,000	8	8
ll	699,319	94,951	...	...	...‡	...‡
Creek and ry.	249,030	8,301	502	...	50	12
Vale	140,000	2,937	187	...	30	40
wn	215,956	14,069	1,963	400	30	6
	108,000	5,398	473	...	3	5
	305,974	15,055	2,362	3,500	3	8½
	120,000	9,851	1,090	...	15	22

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ate. † Figures for last year have been inserted. ‡ No information available.

Incorporated Districts.	Estimated Capital Value of Ratable Property.	Annual Value of Houses and Improved Lands.	Revenue, exclusive of Loans.	Outstanding Loans.	Extent of Roads and Stree	
					Made.	Unmade.
Country Municipalities—continued.						
	£	£	£	£	Miles.	Miles.
Cobar	145,000	9,754	947	...	...‡	...‡
Cooma	175,607	14,592	920	...	10	40
Coonamble	141,900	10,991	973	...	2½	7½
Cootamundra	203,428	16,953	1,792	1,000	4½	9½
Cowra	150,074	9,997	265	...	2½	27½
Cudgegong	446,980	22,349	982	2,000	135	171
Deniliquin	195,679	21,989	4,525	...	13	11
Dubbo	280,884	28,088	2,731	6,000	20	...
Forbes	304,879	19,512	1,812	8,000	7	68
Gerringong	190,000	9,000	1,128	...	21	43
Glen Innes	409,198	25,909	2,944	6,000	40	25
Gosford	126,042	4,313	663	...	3½	6½
Goulburn	979,221	83,018	8,434	10,000	10	36½
Grafton	608,880	32,601	2,348	4,000	27	21
Granville	800,000	44,395	5,262	11,200	60	...
Grenfell	136,925	5,632	684	...	2½	7½
Gulgong	86,000	8,000	543	...	54	20
Gunnedah	83,850	7,250	817	...	4¾	20½
Hamilton	473,471	38,352	2,354	3,500	7¼	4
Hay	322,997	27,925	2,745	7,000	4½	29
Hill End	45,705	2,742	200	...	10¼	2¼
Illawarra Central	526,160	24,667	1,160	...	60	40
Illawarra North	216,350	10 911	788	...	24	20
Inverell	280,000	20,000	1,255	...	22	13
Junee	44,032†	12,394†	1,400	...	¼	6¾
Kempsey	311,200	14,000	1,982	......	5	27
Kiama	557,800	27,890	1,807	......	75	21
Lambton	182,520	12,824	663	3,000	10	5
Lismore	299,151	19,096	3,310	12,000	6	15
Liverpool	475,000	10,780	1,969	5,000	20	80
Maclean	77,100	5,122	421	......	2	10½
Maitland, East	367,825	20,260	3,170	6,000	26	6
Maitland, West	796,361	64,865	6,440	20,000	32¾	1¼
Merewether	419,876	24,786	2,695	4,000	7	5¼
Molong	130,008	12,518	824	400	11	40
Morpeth	115,236	8,380	869	......	6$\frac{1}{10}$	3⅝
Moss Vale	264,412	10,674	18	......	10	25
Mudgee	335,000	18,639	1,735	5,000	7	7½
Musclebrook	92,424	7,702	844	737	5	3
Narrabri	171,900	12,992	1,624	......	6¾	9¼
Narrandera	140,800	12,666	1,391	......	3½	12
Newcastle	2,192,000	159,349	27,683	51,000	15	10
Nowra	131,750	9,100	860	......	20	10
Numba	48,300*	5,325*	365†	......	28†	6†
Orange	464,055	36,037	7,127	5,000	10	4
Orange, East	161,470	11,784	230	......	......‡	......‡
Parkes	164,365	8,218	952	......	11¼	21¼

ated Districts.	Estimated Capital Value of Ratable Property.	Annual Value of Houses and Improved Lands.	Revenue, exclusive of Loans.	Outstanding Loans.	Extent of Roads and Streets.	
					Made.	Unmade.
	Country Municipalities—continued.					
	£	£	£	£	Miles.	Miles.
	1,655,000	74,202	31,791	41,600	80	15
	600,000	17,500	1,193	3,000	31	60
	248,690	23,091	2,846	......	7	5½
arie	100,850	9,780	731	......	15	20
d Sherwood	437,500	31,000	1,196	5,000	38	50
	87,200	6,975	1,079	......	3	7
errace	71,675	5,612	696	1,000	1½	7¼
	149,393	6,306	489	1,200	7¼	......
	626,371	21,648	1,671	4,503	38	17½
	75,000	3,840	90	......	......	8
r	176,437	13,915	960	......	50	6
, Central	110,000	4,311	337	500	14	6
	100,000	15,042	2,033	......	1¾	13¼
	176,685	13,144	1,264	......	6	5¼
South	55,824	4,834	708	1,000	4½	¾
	373,823	29,260	3,375	......	15	17
	82,000	4,230	492	......	2½	4
	180,600	13,589	891	......	24	50
	120,317	9,521	820	......	2	11
	200,000	14,000	1,129	......	75	10
	229,460	8,973	662	......	69	51
	64,620	4,213	497	......	3	6¼
gga	845,640	39,994	5,826	3,200	9¾	40¼
	339,300	32,600	3,829	1,000	10¼	3¾
	300,000	10,000	1,676	5,000	15	15
	131,700	9,491	907	......	5	32
	135,925	8,490	781	......	4¾	12
	521,653	37,104	3,784	12,000	9½	2
	206,480	17,259	4,118	7,400	2	12
	240,532	15,346	968	......	11	3
g	696,000	25,377	3,153	5,000	18	12
	165,000	16,200	984	......	11½	22
	301,771	25,558	2,417	......	48¾	60¼
d Lands	....	177,495	......	......	......	......
Country	30,073,617	2,149,566	234,035	306,637	$1{,}744\frac{1}{10}$	1,830⅝
Metropolitan	90,211,478	5,215,878	497,734	1,245,450	809	636½
all Incorporated tricts.	120,285,095	7,365,444	731,769	1,552,087	$2{,}553\frac{1}{10}$	2,467⅛

ate. † Figures for last year have been inserted. ‡ No information available.

capital value of ratable property is made up of 146, representing the capital value of improved lands, lands upon which buildings have been erected, or which ated, or have been let for pastoral, mining, and other

Capital and annual value of ratable property.

purposes; and £13,794,949 the value of unimproved lands, classed as such for municipal purposes. The annual value is made up of the actual rental of improved lands, and 5 per cent. of the capital value of unimproved lands.

Municipal Revenue.

The total revenue collected by all the Municipalties of the Colony during the year 1888 amounted to £731,769, including the State endowment of £117,885, but not the proceeds of loans. The chief heads of revenue were as follows:—

Incorporated Districts.	General rates.	Other rates.	Endowment	Other Revenue.	Total.
	£	£	£	£	£
Sydney—City	150,073	......	25,000	88,605*	263,678
" Suburbs	119,845	30,966	39,528	43,717	234,056
Country	85,401	35,351	53,357	59,926	234,035
Total............	355,319	66,317	117,885	192,248	731,769

* Includes £45,045 from the Sewerage Fund administered by the City Council.

No lighting rate is levied in the city, but in order to make the comparison complete, the cost of lighting should be deducted from the general rates; the amount spent for this service during 1888 was £12,590. In all other Municipalities the cost of lighting is a distinct charge from the general rates.

The general rates amounted to £355,319, one shilling in the £ being the ordinary rate of all Municipalities except the City of Sydney, which levies 1s. 6d. for every £ sterling of annual value.

Special rates.

Other rates for gas, sewerage, and water services are levied in many municipalities, and the receipts under this head amounted in 1888 to £66,317. This sum does not include the proceeds of rates levied by the Metropolitan Water and Sewerage Board which, though actually local rates, are not collected by the Municipalities affected by them. The amount received by the Board during 1888 was £75,089, making, with the sum already mentioned, £141,406 as the proceeds of special rates from these services. The amount of gas, sewerage, and water rates varies between 1d. and 1s., though the average is not more than 4d. in the £.

State endowment.

The State endowment is equivalent to 3s. 9d. per resident, and amounted to 16·1 per cent. of the total revenue received. The proportion which each source of revenue bears to the whole varies considerably, as the following statement shows :—

Percentage of Municipal Revenue derived from various sources.

Incorporated Districts.	General Rates.	Other Rates.	Endowment.	Other Revenue.
	per cent.	per cent.	per cent.	per cent.
Sydney—City ……	56·92	………	9.48	*33·60
Sydney—Suburbs …	51·20	13·24	16·89	18·67
Country …………	36·49	15·11	22·80	25·60
Total—Colony ……	48·55	9·06	16·12	26·27

* Includes sewerage revenue administered by the City Council.

Gross revenue of Municipalities.

It will be seen from a previous table that the gross revenue of all municipalities, not including the State Endowment, is £613,884; if to this be added the revenue of the Metropolitan Water and Sewerage Board, the total will reach £688,973. This may be taken as the whole burthen of local taxation, and is equivalent to 22s. per head of the population residing within the limits of incorporated districts, and to 9·35 per cent. of the total annual value of ratable property.

Expenditure.

The total expenditure during 1888 by the various municipalities amounted to £926,295, which is £194,526 in excess of the receipts from ordinary sources, the excess being accounted for by expenditure from loans raised during the year, or remaining over from previous years. The municipal expenditure may be grouped under the following heads :—

	£
Salaries and office expenses ……… …………	56,954
Improvement works ……………………………	542,268
Lighting, sewerage and water …………………	*102,697
Interest and sinking funds ……………………	120,070
Miscellaneous ………………………………… ..	104,306
Total……………………	£926,295

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* Includes £32,218 for sewerage of the city of Sydney under the Council's administration.

The cost of administration shown above, viz., £56,954, amounts to 6·15 per cent. of the disbursements; the expenditure on public works, including lighting, sewerage and water supply, to 69·63 per cent.; and the interest and Sinking Funds for repayment of loans to 12·96 per cent. of the total disbursements.

Expenditure of the Municipality of Sydney.

The expenditure of the Municipality of Sydney reached in 1888 the sum of £248,750, which may be distributed as under:

	£
Salaries and office expenses	9,581
Improvement works	131,526
Lighting	12,590
Interest	33,700
Loans, Streets, and Town Hall Sinking Funds	10,350
Other charges, including sewerage expenditure administered by the City Council	51,003
Total	£248,750

The expenses of administration only amount to 3·85 per cent. of the whole disbursements, improvement works take 52·87 per cent., lighting 5·06 per cent., interest and sinking funds 17·71 per cent., and other charges 20·51 per cent. of the total expenditure.

Suburban expenditure.

The expenditure of the suburban boroughs and municipalities for the year was £369,256, which may be subdivided under the following heads:—

	£
Salaries and office expenses	19,736
Public works	234,219
Lighting	28,112
Interest on loans	27,262
Miscellaneous, including repayment of loans	59,927
Total	£369,256

The office expenses amounted to 5·35 per cent. of the total revenue of these municipalities, and will appear by no means unreasonable when the smallness of some of the districts and the difficulties attending the inception of municipalities are borne in mind. The large proportion of 63·43 per cent. was expended upon public works; light and water services claiming in addition 7·61 per cent. of the total expenditure. To cover interest upon loans 7·38 per ent. was required, the remaining proportion of 16·23 per cent. being devoted to miscellaneous services. The expenditure of the other municipalities of the Colony for the year 1888 was £308,289, which, divided under the same headings as given for suburban municipalities, would appear as follows:—

Country municipal expenditure.

	£
Salaries and office expenses	27,637
Public works	176,523
Lighting and water supply	29,777
Interest on loans	14,330
Miscellaneous, including repayment of loans	60,022
Total	£308,289

The salaries and office expenses form a charge of 8·96 per cent. upon the total receipts during the year, which is considerably larger than in the suburban municipalities. The greater number of the country boroughs and municipal districts are large in area and small in population and revenue, and the proportion of expenses required to defray salaries and other charges is naturally larger than in the case of the more compact and populous districts surrounding the metropolis. The proportion of expenditure under various heads is as follows:—

Salaries and office expenses	8·96	per cent.
Public works	57·26	,,
Lighting and water supply	9·66	,,
Interest on loans	4·65	,,
Miscellaneous, including repayment of loans	19,47	,,

Municipal loans.

The revenue of the municipalities of the Colony from loans amounted to £253,840 during the year 1888; while the sum paid off existing loans, or towards sinking funds for the extinguishing of loans, was £44,778. The total indebtedness at the close of the year was £1,552,087, and towards meeting this amount there was a sum at the credit of the sinking funds amounting to £109,907, so that the net liability was £1,442,180. The sum quoted above was owing during only part of the year, so that the total interest paid amounted to only £68,092, the rate

Indebtedness per head.

varying from 4 to 9 per cent., the average rate of interest being 6 per cent. The total debt per head of population living in municipalities amounts to £2 9s. 6d., while the yearly charge for interest is 2s. 2d. per head. These sums, viewed apart from the resources of the municipalities, are by no means formidable; but, taken in connection with their general assets, the local debts of municipalities will appear insignificant. The returns from the municipalities and boroughs are not by any means complete, so that the total figures given must be taken as the nearest approximations that can be arrived at. The whole of the before-mentioned debt was incurred for public works and buildings. The following are the city liabilities :—

City loans.

	£	£
Debentures (interminable)	100,000	
Average Bank overdraft	20,000	
		120,000
Loans on Debentures (terminable at fixed dates)—		
Cattle Sale-yards Fund	60,000	
Town Hall Loan Fund	275,000	
Streets Loan Fund	300,000	
		635,000
Total		£755,000

Payment of these latter sums on maturity is, by Act of Parliament, in each case peremptorily provided for by the institution of sinking funds. The amount paid into the sinking funds during 1888 was £10,350.

Assets of city of Sydney.

Against this debt of £755,000 there exist assets approximately amounting to £2,527,834, distributed as follows :—

	£
Value of made roads, &c.	750,000
Town Hall	400,000
Markets and land	630,000
Other buildings	120,000
Cattle Sale-yards	120,000
Wharves	410,000
Sinking Funds	97,834
Total	£2,527,834

And if to this sum be added the present value of future rates, lowing twenty years' purchase amounting to £3,000,000, the ssets of the City Corporation amount to about £5,527,834, so hat the indebtedness of the city of Sydney amounts to only 13·6 er cent. of the available assets.

Assets of other municipalities.

The liability of the other incorporated districts of the Colony mounted to £796,587, or nearly four times the ordinary rates of he year. Against this they have assets amounting approximately o £3,408,641, distributed as follows :—

	£
Value of made roads and streets	3,041,380
Buildings	367,261
Total	£3,408,641

rom this sum should be deducted a surplus of liabilities over ssets amounting to £48,764, leaving the estimated value of assets t £3,359,877.

The present value of future rates at twenty years' purchase mounts to £4,080,000, which, added to the sum stated above, ould make the total assets of these municipalities reach the sum f £7,439,877. The total municipal debt of the incorporated istricts outside the boundaries of the city of Sydney would herefore appear to be only 10·7 per cent. of the available assets.

Streets and roads.

The length of streets and lanes within the boundaries of the ity is 110 miles, and nearly all the roadways are formed, kerbed, nd bordered by pavements of asphalt, tarred stone, flagging, or ther suitable material, while 271,209 square yards of carriageway have been laid with wood blocks. The value to the city f these streets is hardly less than £750,000. Throughout the uburbs the extent of roads and streets is 1,335 miles, of which 99 miles are regularly formed, and the approximate value of hese roadways, with culverts, bridges, and similar works, may be et down at £1,662,787. In the other municipalities of the Colony here are 1,744 miles of made roads, and 1,831 miles of unformed oads, the value of these improvements being about £1,378,593.

Municipal works.

Municipal councils are authorized by law to undertake the construction of water, sewerage, or gas works, in addition to the work usually carried on by them. To regulate the construction, maintenance, and management of these works, various enactments have been passed.

Water supply.

Nepean scheme.

Prospect Reservoir.

As early as 1850 authority was given the City Corporation by the Legislative Council for the construction of water and sewerage works, and in accordance with such authority a system of water supply from the Lachlan, Bunnerong, and Botany Swamps was adopted. This scheme involved the interception of the water, from the stream draining these swamps, at a point near the shore of Botany Bay, and pumping it to Crown-street Reservoir, 132 feet above the level of the sea; thence a portion was raised to Paddington, 280 feet over sea-level, and a further portion to Woollahra, 320 feet over sea-level. The cost of the water supply works as carried out by the City Corporation, including 301 miles of reticulation pipes, was £1,719,565. These works have now been superseded by the Nepean scheme, recommended by the Royal Commission on Water Supply, and carried out by Mr. E. O. Moriarty, M.I.C.E. The works in connection with this scheme have been conceived on a scale of magnitude commensurate with the growth to which Sydney will ultimately attain. The source of supply is the united waters of the Nepean, Cataract, and Cordeaux, mountain streams draining an area of 324 square miles, fed by the abundant rain which falls along the coast district west of Wollongong. The water is intercepted at a height of 437 feet above the level of the sea, and flows through a series of conduits—partly tunnel, partly open canals, and in places wrought-iron aqueducts—to Prospect Reservoir, a distance of 40 miles from the farthest source of supply. Here an impounding reservoir has been constructed capable of holding 11,000 million gallons, of which nearly 7,000 million will be available for supply, the remainder being intended as a settling area. The top water at Prospect Reservoir is 195 feet over high water in Sydney Harbour. From

Prospect the water is led through open conduits for a further distance of 4¾ miles, whence it is taken to Crown-street Reservoir, a distance of 16 miles, in iron pipes. The conduits above Prospect Reservoir have a capacity of 150 million gallons per day, and for 10 miles below this reservoir the capacity of the canals and pipes equals a maximum of 50 million gallons, while for the last 11 miles the water flows through 48-inch and 42-inch cast-iron pipes, having a capacity of 17·5 million gallons daily. In this work there are:

Capacity of conduits.

Tunnels	11¾	miles.
Open canals	33¼	,,
Wrought-iron pipes, 8ft., 7ft. 6in., and 6ft. diameter	5½	,,
Cast-iron pipes, 48in. and 42in. diameter	11	,,
Water surface of reservoir	1½	,,
Total	63	miles.

All the works in connection with this magnificent scheme are completed with the exception of Prospect Reservoir. The dam in connection with this work is 1¾ miles long, and 80 feet deep in the centre, and contains 2,316,500 cubic yards of earthwork; it has been already raised sufficiently high to enable the canals leading to Sydney to be supplied. The cost of the works to the close of 1888, including purchase of land and supervision, was £2,499,970. By a recent Act the management of the whole of the Metropolitan Water Supply, including both the Botany and the Nepean works, as well as the reticulation and supply of Sydney, has been placed in the hands of a board called the Metropolitan Water Supply and Sewerage Board, three members of which, including the chairman, are appointed by the Government, and four elected by the municipalities interested. At present the number of persons supplied with water in the metropolitan district is about 260,000; the average consumption is 9,000,000 gallons daily, or at the rate of 35 gallons per head.

Cost of works.

Country water supply.

The Country Water Supply and Sewerage Act was passed in 1880. Under the provisions of this measure municipalities outside

Conditions of loans for water works.

the county of Cumberland are entitled to construct, or have constructed for them by the Government, works for water supply and sewerage, provided the construction of the same be approved by the Governor-in-Council, and the municipalities agree to pay back the original cost of the works, with interest at the rate of 4 per cent. per annum. The Government pays for the certified cost of the works, and the municipalities pay the Government by instalments extending over a period of twenty-eight years. Under the operations of this Act eight water supply works have been carried out by the Government and two by municipal councils, while three are at present under construction. The works completed by the Government are—

Works constructed.

Town.	Cost.	Town.	Cost
Wagga Wagga	£37,998	Bourke	£13,845
Albury	41,835	Wentworth	8,860
Bathurst	51,492	Deniliquin	17,622
Goulburn	51,076	Hunter River District	338,857

while Parramatta, Hay, Forbes, and Wilcannia have been carried out by the municipalities themselves, and Lismore, Orange, and Balranald are being carried out by the Government. During 1888 there was expended on account of the Country Towns' Water Supply a total sum of £78,814, subdivided as follows:—

Hunter River District	£38,758	Forbes	£8,000
Albury	3,397	Hay	7,000
Goulburn	880	Bourke	5,898
Bathurst	1,966	Cowra	630
Wagga Wagga	753	Campbelltown	114
Wentworth	1,762	Liverpool	106
Orange	2,432	Coonamble	131
Lismore	6,226	Other	120
Balranald	5,641		

These various amounts were contributed by the Government towards the cost of maintenance and extension of the works completed in the above mentioned municipalities, and for the construction of new works.

Sewerage.

Under the same Act which authorized the construction of the ydney water supply, the sewerage works were also undertaken. he original sewerage works of Sydney were begun in 1854, and p to the close of 1888, 68 miles, 1,585 yards of sewers of all kinds ave been constructed, at a charge of £964,595, the expenditure in 888 being £32,218. In 1880 an entirely new scheme of sewerage f a very comprehensive character was begun. This system will rain the whole of the northern and southern slopes of the city and uburbs, discharging the sewerage of the former into the ocean etween Bondi and South Head, and of the latter at a ewerage farm on the shores of Botany Bay. This system is early completed, and at the close of 1888 about £794,382 had een expended upon it.

Gasworks.

Under the authority of a recent Act gasworks have been contructed in several places by municipalities; further particulars in espect to which will be found under the head of Manufactures nd Works.

Houses and population.

In Sydney there are approximately 21,437 houses, occupied by 25,158 persons, while the number of ratepayers is 6,321. In the uburbs of Sydney there are 51,315 houses, in which 247,597 ersons dwell, while in the other municipalities there are 49,521 ouses, occupied by 254,151 persons. In the unincorporated porion of the Colony there are about 100,000 houses, inhabited by 71,016 persons.

Municipal elections.

Municipalities are for the most part divided into wards, according o population, and every ratepayer is entitled to vote at the elecion of aldermen. Persons assessed at less than £25 annual value re entitled to one vote—from £25 to £75, to two votes—from £75 o £150, to three votes—and over £150, to four votes. Votes are umulative up to four, and the method of voting is by ballot, as in he parliamentary elections.

The persons qualified to vote at municipal elections number approximately 129,530, thus distributed:

	Municipal voters.
Sydney	22,006
Suburbs	53,240
Other municipalities	54,284
Total	129,530

Number of electors.

The number of electors entitled to vote for Parliament is 280,160, so that the proportion of municipal to parliamentary voters is 46·23 per 100, and to the total population 11·93 per 100. Including the twenty-four representatives of the city, there are 1,161 aldermen in the Colony, and the average number of municipal electors per alderman is thus 112. Of the 129,530 electors mentioned above, 73,266 are entitled to only one vote, 36,057 are entitled to two, 11,396 to three, and 8,811 to the maximum of four. The records of the voting in the various municipalities are very imperfect; but it would appear that at the elections for aldermen to serve during the year 1889 there were 17,005 voters who recorded their vote in the suburban and country municipalities and at the city elections. No comparison can be made as to the proportion of persons entitled to vote who exercised their privilege, as in a large number of municipalities no contests took place, whilst in others there were not contests in all the wards.

Extension of local government.

It is proposed by a measure now before Parliament to extend the system of local government over the remaining portions of the Colony. This is on all sides deemed a very necessary step, as under the present system there is no certainty that the expenditure of the Government on purely local works is at all times equitable. Leaving out of consideration the expenditure on works of national importance, the Government during the past twenty-nine years expended no less than £18,276,673 on works of a purely local character, not including school buildings. Of this sum £12,176,947 was expended in the country districts, and £6,099,728 in the metropolis. The division of the Colony into local government districts will not necessarily be followed by an entire stoppage of the direct expenditure in works of merely local interest by the central Government, Expenditure by Government for local purposes.

ıe larger portion of the works now undertaken by Government ·e left to the local authorities, who, having to directly provide ıf the expenditure, will probably see that it is laid out to the ıdvantage. Adopting the two divisions of metropolis and ry, already mentioned, the expenditure in each since 1860 is below. As regards the metropolitan expenditure, nearly the total—viz., £2,961,498—was expended on water supply sewerage works, which are sources of revenue. In the ry districts the amount expended on similar works was only ,549.

mounts expended on Local Public Works in the Country Districts and Metropolis.

Country districts.		Metropolis.		Total.	
Expenditure.	Rate per head.	Expenditure.	Rate per head.	Expenditure.	Rate per head.
£	£ s. d.	£	£ s. d.	£	£ s. d.
65,861	0 5 4	21,240	0 4 5	87,101	0 5 1
103,250	0 8 0	34,709	0 7 1	137,959	0 7 9
118,131	0 8 11	40,612	0 8 5	158,743	0 8 9
94,825	0 6 11	15,842	0 3 3	110,667	0 5 11
133,591	0 9 4	17,352	0 3 6	150,943	0 7 10
109,835	0 7 5	12,168	0 2 4	122,003	0 6 0
92,796	0 6 0	9,963	0 1 9	102,759	0 4 11
137,405	0 8 7	37,621	0 6 4	175,026	0 8 0
163,819	0 9 11	33,701	0 5 5	197,520	0 8 8
190,810	0 11 1	21,460	0 3 4	212,270	0 9 0
124,540	0 7 0	32,347	0 4 10	156,887	0 6 5
169,239	0 9 4	18,009	0 2 7	187,248	0 7 4
129,003	0 6 9	40,524	0 5 8	169,527	0 6 5
230,385	0 11 7	51,056	0 6 10	281,441	0 10 4
265,003	0 13 0	48,211	0 6 3	313,214	0 11 1
375,819	0 17 9	47,781	0 6 0	423,600	0 14 5
415,025	0 19 0	68,710	0 8 2	483,735	0 16 0
497,184	1 2 0	60,141	0 6 10	557,325	0 17 8
643,912	1 7 4	86,373	0 9 2	730,285	1 2 2
794,983	1 12 5	165,856	0 16 6	960,839	1 7 10
793,966	1 11 0	201,734	0 18 10	995,700	1 7 5
583,471	1 1 10	357,182	1 11 4	940,651	1 4 9
704,892	1 5 5	702,696	2 18 1	1,407,588	1 15 5
758,052	1 6 3	931,615	3 12 0	1,689,667	2 0 6
940,858	1 11 3	669,209	2 8 0	1,610,067	1 16 6
981,951	1 11 6	704,636	2 6 9	1,636,587	1 16 2
868,923	1 6 4	767,906	2 7 6	1,636,829	1 13 5
784,941	1 3 1	556,660	1 12 6	1,341,601	1 6 3
904,477	1 5 7	344,414	0 19 2	1,248,891	1 3 5

Public parks and recreation reserves.

It has always been the policy of the State to provide the residents of incorporated towns with parks and reserves for public recreation, and the City of Sydney contains within its boundaries an extent of parks, squares, and public gardens larger than exist in most of the great cities of the world in proportion to their respective areas. They cover altogether 728 acres, or 27 per cent. of the whole of the city proper. The suburban municipalities are also well provided for, as they contain 2,285 acres of public parks and reserves, dedicated to, or purchased for, the people by the Government, or 3·1 per cent. of their aggregate area.

The National Park.

In addition to these reserves, the Government dedicated to the people, in December, 1879, a large area of land, situated within easy distance of the metropolis. This estate, now known as the National Park, with the additions subsequently made in 1880 and 1883, contains a total area of 36,320 acres, surrounding the picturesque bay of Port Hacking, and extending in a southerly direction towards the mountainous district of Illawarra. It is covered with magnificent virgin forests, the scenery is charming, and its beauties attract thousands of visitors.

Temporary and permanent commons.

In the country districts, reserves extending often over several thousand acres, have been proclaimed as temporary commons, whilst considerable areas have been from time to time dedicated as permanent commons attached to inland townships, which are otherwise well provided with parks and reserves within their respective boundaries.

PART XXII.

Social Condition and Charities.

IT will seen from the foregoing pages that the material prosperity of New South Wales compares favourably with that of any other country, however fortunate may be its lot. But in one particular this Colony, in common with all the provinces of Australia, differs greatly from other countries, especially those of the Old World. Wealth is widely distributed, and the contrast between rich and poor, which seems so peculiar a phase of old-world civilizations, finds no parallel in these southern lands. That there is poverty in the colonies is undeniable, but no one in Australia is born to poverty, and that hereditary pauper class, which forms so grave a menace to the freedom of many states, has, therefore, no existence here.

Propertied classes.

It is estimated that in the United Kingdom six persons in every hundred possess property to the amount of £100; whereas in this Colony 12 per cent. of the population have property. This bare statement shows the vast difference in the conditions of life in Australia and in the richest country of Europe. No poor rate is levied in this Colony, nor is such needed; for although it may happen that from time to time the assistance of the State is claimed by, and granted to, able-bodied men who are unable to find employment, that assistance takes the form of wages paid for work specially provided by the State to meet a condition of the labour market which is certainly abnormal.

State assistance to charities.

The chief efforts of the State, as regards charity, are directed towards the rescue of the young from criminal companionship and

Public park recreation reserves.

[illegible] the care
[illegible] private charity.
[illegible] ration of want.

[illegible] philanthropic purposes,
[illegible] the expenditure
[illegible] institutions there are
[illegible] the relief of those
[illegible] are beyond all

The Natio Park.

[illegible] ted in two ways—
[illegible] Board, which takes
[illegible] abandoned them, or
[illegible] of their parents, to
[illegible] lapse into crime; and
[illegible] already committed
[illegible] themselves unable to

[illegible] mortality it has been
[illegible] caused by accident is
[illegible] liar nature of the occu-
[illegible] adult male population
[illegible] has long been settled,
[illegible] very many men are
[illegible] of everyday life, and
[illegible] or injury. Hospitals
[illegible] conditions of life in
[illegible] are accordingly found
[illegible] close of the year 188
[illegible] hospitals or infirmaries.
[illegible] Vincent's Hospital in

Temporar permanen commons.

[illegible] Hospital, for which
[illegible] modation was provided

331 wards or dormitories, having a total capacity of 2,137,658
ic feet, so that the average air space to each dormitory was
8 cubic feet. There were 1,920 beds, and the average air
e to each patient was a minimum of 1,113 cubic feet,
as the hospitals are rarely filled to the limit of their
mmodation, the air space to each patient was as a rule
h greater than the minimum just stated. During the
15,176 persons were under treatment as indoor patients.
this number 1,108 remained from the previous year, and
68 were admitted during 1888. There were discharged
45 persons, either as cured or relieved, or at their own re-
st, and 124 as past all human assistance, while 1,424 died.
number remaining in hospital at the close of the year was
efore 1,183. The following statement shows the number of
issions, discharges, and deaths for the past ten years :—

Persons under treatment.

Number of Cases treated in Hospitals.

r.	Total Patients under Treatment.	Number Discharged as Cured, &c.	Deaths.		Number of Patients at the close of Year.
			Number.	Per cent.	
9	7,560	6,021	755	9·98	784
0	8,315	6,656	847	10·18	812
1	9,136	7,275	946	10·35	915
2	8,445	6,855	894	10·58	696
3	8,245	6,659	796	9·65	790
4	9,318	7,375	952	10·21	991
5	12,793	10,449	1,329	10·38	1,015
6	13,115	10,825	1,249	9·52	1,041
7	13,438	11,140	1,190	8·85	1,108
8	15,176	12,569	1,424	9·38	1,183

he number remaining at the close of the year may be taken as
esenting the average number resident. It will be seen from
preceding table that the increase has been fairly regular, so
the proportion of the population to be found in hospitals is
st the same in each year and averages 1·05 per thousand.
length of time during which patients remain under treat-
t has not been exactly determined; but as far as the informa-
extends it would appear the average is 28·4 days for all

Average number of hospital cases.

hospitals. That this computation may be fairly relied on may be gathered from the last reports of the Sydney Hospital, the Prince Alfred Hospital, and St. Vincent's Hospital. In these institutions the average periods of residence of all patients during 1888 were 24, 31·6, and 30·8 days respectively. It is interesting to note that the time patients, received under orders from the Government, remained in hospital was on the average longer than in the case of those paying for or contributing towards their own support.

Death rates in hospitals.

The death rate per 100 persons under treatment during the past ten years was 9·84, while the rate for 1888 was 9·38 or ·46 below the decennial average. The rate for each year will be found in the preceding table. The death rate of hospitals in New South Wales, compared with Europe, is undoubtedly very high. The number of fatal cases is swollen by the inclusion of the deaths of persons already moribund when admitted, and of persons in the last stage of phthisis. It has elsewhere been pointed out that deaths from accidents form a very considerable proportion of the total deaths registered, a circumstance due to the nature of the occupations of the people, and the dangers incidental to pioneering enterprise. A large majority of the accidents that occur are treated in the hospitals; and, indeed, these institutions, especially in country districts, are for the most part maintained for the treatment of surgical cases. When these circumstances are taken into consideration the cause of the apparent excess of deaths in the hospitals of the Colony will be at once understood.

Outdoor relief.

No exact information is to hand respecting the outdoor relief afforded by hospitals, this form of charity not being so important as indoor relief; nevertheless, the number of attendances during 1888 was 50,483, and estimating four attendances to each person, there were relieved 12,621 persons.

Expenditure on hospitals.

Omitting from consideration the Government establishment at Little Bay, the expenditure in 1888 of all the hospitals of the Colony for purposes other than building, repairs, and out-door relief was £84,512, representing an average of £85 10s. 9d. per patient re dent, or for each bed occupied. This sum is somewhat in excess of the truth, as full deduction cannot be made for out-patients. The average cost per patient treated was £6 7s. 4d. The subscriptions received from private persons amounted to £35,818, and the miscellaneous receipts, including payments by patients, were £18,192, in all £54,010 from private sources and from patients. From Government the sum of £52,074 was received, so that the total revenue of hospitals from all sources was £106,084. The following statement shows the revenue and expenditure of these institutions for the year 1888:—

Revenue of hospitals.

Revenue and Expenditure of Hospitals.

	Metropolitan.	Country.	Total.
Receipts—	£	£	£
Government Aid............	24,749	27,325	52,074
Private Contributions.....	10,831	24,987	35,818
Other sources...............	9,449	8,743	18,192
Total receipts.........	45,029	61,055	106,084
Expenditure—			
Building and Repairs......	6,491	10,438	16,929
Maintenance	35,105	39,649	74,754
Outdoor Relief	809	402	1,211
Miscellaneous	3,798	5,960	9,758
Total expenditure...	46,203	56,449	102,652

Total expenditure by the State.

The expenditure in connection with the Little Bay Hospital has not been included above, being entirely in the hands of the Government. The cost of this institution was £9,874, so that the total expenditure of the State on hospitals amounted to £61,948, and the gross expenditure by the Government upon all hospitals and asylums, with the exception of asylums for the insane, was £132,566. This sum includes £22,477 to the State Children's Relief Department. and £43,304 paid to support the asylum for old men at Liverpool, the asylum for aged and infirm women at Newington, Parramatta River; the two asylums at Parramatta, and the Benevolent Asylum, Sydney. In these five last-mentioned asylums, the number of wards or dormitories was 101, with a total capacity of 1,409,385 cubic feet, giving an average air space of 13,954 cubic feet to each dormitory. There were 2,419 beds; the average air space to each patient was therefore 583 cubic feet. The number of inmates in each institution will be found in a table on pages 736 and 737, but in addition, considerable aid was extended to the outside poor. Apart from medical advice and medicines, outdoor relief consists largely of supplies of provisions. Information is not to hand for the full extent of the relief thus afforded at all institutions, but the goods gratuitously distributed at the Benevolent Asylum, Sydney, during the year were as follows:—Bread, 193,908 lb.; flour, 66,359 lb.; meat, 30,905 lb.; tea, 7,243 lb.; sugar, 29,025 lb.; sago, 4,907 lb.; rice, 10,454 lb.; oatmeal, 7,205 lb.; arrowroot, 97 lb.; raisins, 598 lb.; and milk, 206 quarts. Boots, blankets, flannel and other drapery goods, formed portion of the bounty distributed; and in addition to this the sum of £2,576 was granted in payment of rent allowances, so that many of the needy were assisted by the helping hand of this deserving charity in their own homes.

Accommodation in Asylums.

Benevolent Asylum, Sydney.

The Infants' Home, Ashfield; the Hospital for sick children, Glebe; the Institution for the deaf and dumb, and the blind, Newtown, besides other institutions in different parts of the Colony, receive help from the State; but they are maintained principally by private contributions. The management of these, and, indeed, of almost all institutions for the relief of the sick, is in the hands of committees elected by persons subscribing towards their support.

year, 1879–88.

Institution.	1879.		1880.		1881.		1882.		1883.		1884.		1885.		1886.		1887.		1888.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Industrial Blind Institution, Sydney	...	...	...	...	..	...	9	...	10	...	20	...	20	...	21	...	22	...	25	...
Industrial Home for Blind Women, Petersham	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	14	...	17
Consumptives' Home, Picton	...	...	...	...	...	...	...	...	12	4	12	5	13	4	19	8	22	10	24	8
House of the Good Samaritan	...	68	...	94	...	49	...	56	...	84	...	62	...	64	...	80	...	66	...	58
Sydney Female Refuge.........	...	46	...	37	...	40	...	47	...	37	...	43	...	44	...	48	...	44	...	39
Infants' Home, Ashfield (women)	...	...	...	...	...	...	...	20	...	12	...	23	...	11	...	19	...	22	...	22
*City Night Refuge, &c.	20	...	20	...	20	...	20	...	20	...	20	...	19	...	18	...	18	...	18	...
Total............	20	114	20	131	20	89	29	123	42	137	52	133	52	123	58	155	62	156	67	144

* Meals given during the year ending 30th June, 1889, 105,247; shelter provided in 41,621 instances; daily average, 290 meals, and 112 nightly shelters—representing 9,550 distinct persons supplied with dinner, and 6,010 separate persons afforded shelter for the night followed by breakfast.

Charitable asylums.

Besides hospitals properly so called, there exist various institutions for the reception of fallen women, for the treatment of the blind, and the deaf and dumb; for destitute women, for casual aid to indigent persons, for the help of discharged prisoners, and for many other purposes which rouse the charity of the people. Exact figures respecting every institution have not been procurable. The foregoing table gives the number of adult persons remaining at the close of 1888 in some of the institutions named, and may be taken as representing the average for the year. The figures for the City Night Refuge and Soup Kitchen show only the number of persons usually retained about the establishment. There were 105,247 meals given during the year ending 30th June, 1889, at the Refuge, and shelter was provided in 41,621 instances. The number of separate persons supplied with dinners was 9,550, and the number afforded shelter and provided with breakfast was 6,010; the daily average being 290 meals, and 112 nightly shelters. During the tempestuous and unusually wet weather which commenced towards the close of May, 1889, and lasted about a fortnight, the Institution, at the urgent request of the Government, provided food and shelter for the unemployed to the number of 380 to 400 daily. The new building, which was completed and opened on the 3rd October, 1887, has proved a great boon to the homeless poor of the city, there being 9,264 meals and 2,741 beds supplied in excess of the numbers of the previous year, thereby showing that the accommodation at the Night Refuge is eagerly sought after.

City Night Refuge.

Destitute children.

The problem of dealing with destitute children and those liable from their environment to become criminal is naturally surrounded with very great difficulty, and its solution was attempted many years ago by the establishment of the orphanages at Parramatta, and the destitute children's asylum at Randwick, as well as the Vernon Reformatory for boys, and the Biloela Reformatory for girls. The system of crowding children in large establishments was rightly considered as open to many grave objections, and in

1880 a scheme of separate treatment was inaugurated. Accordingly an Act was passed by the Legislature, empowering the formation of a Board, to whose charge the destitute or neglected children of the Colony were entrusted. The Board was empowered to take children from the various institutions, and deal with them in certain specified ways.

State Children's Relief Board.

During the nine years ending December, 1888, the number of children placed out by the State Children's Relief Board had increased to 2,893; of these 761 were reclaimed by their relatives or friends, or otherwise discharged, and 148 were adopted principally by persons possessing no children of their own. On reaching the age of 12 years, children are eligible to be apprenticed, if they are physically fit therefor, and 654 apprenticeships have been sanctioned. The majority of the girls have been placed at domestic service, and about two-thirds of the boys have been apprenticed to farmers. The largest number of the children (1,194) have been boarded out, the Government paying certain persons, deemed eligible, sums varying from 5s. to 7s. per week for the maintenance of those put under their charge. The Board exercises a strict watch over all children in its care, and cases of neglect or ill-treatment have been very infrequent. The remaining children in December last were distributed as follows:—Four in the Central Home, 7 in Hospitals, and 97 consigned to Cottage Homes for invalids, of which there are two at Parramatta and five at Mittagong. Although a considerable number (795) passed through the Central Home at Paddington during last year, the system in force provides for their speedy removal to the country; and so the average daily number of inmates at that institution was only nine. In the annual reports of the State Children's Relief Department much interesting information is given concerning the problem of how to cope successfully with the difficulty of maintaining State children; and, after nine years' experience of the boarding-out system in this Colony, it is claimed that when fairly tested the advantages that may be realized thereby, are much greater than under the system

Supervision of children.

of aggregating children in asylums. The deaths of seven children occurred during the year, and, allowing for those removed from the supervision of the Board, there remained at the close of 1888 2,093 children under its control, of whom 1,291 were supported by the State.

Number of children under control.

The number of children under the control of the Board has increased materially since 1880, as will be seen from the following figures :—

Year.	Number under control.
1880	52
1881	80
1882	245
1883	454
1884	867
1885	1,315
1886	1,699
1887	1,928
1888	2,093

Ages of children.

The ages of children placed out since the inauguration of the system of relief were—

Year.		Year.	
Under 1	16	8 to 9	362
1 to 2	50	9 to 10	351
2 to 3	179	10 to 11	280
3 to 4	231	11 to 12	237
4 to 5	227	Over 12	215
5 to 6	221		
6 to 7	255	Total	2,893
7 to 8	269		

The largest number of children dealt with by the Board have been received from the Benevolent Asylum, Sydney, 1,847 having been transferred up to the end of 1888; from the Randwick Asylum 305, and from the Orphan Schools, Parramatta, 362 children were taken. The orphan schools were closed in September, 1886, and the children who would formerly have been sent to them are now taken charge of by the Board. The remaining children were removed from other public institutions and hospitals; from the Vernon, 164; from the Infants' Home, Ashfield, 57; from Industrial School, Parramatta, 63; from Little Bay Hospital, 26; from Benevolent Asylum, Newcastle, 39; and ther institutions, 30; making a total of 2,893 as aforesaid. The mount expended by the Government on the State Children's Relief Department during the year was £22,477.

Operations of Board successful.

The operations of the Board must be held to be extremely successful, as not only are the children individually more satisfactorily treated than could be the case in crowded institutions, but the number becoming a charge on the State is now proportionally less than formerly was the case, and the admirable system of relief organized by the Board bids fair to solve the difficult problem of juvenile destitution and juvenile crime. The number of destitute children, including those detained at Biloela and on the Vernon, and in the various asylums, during each of the past fourteen years, was—

Destitute Children.

Year.	Number.	Year.	Number.
1875	1,513	1882	1,858
1876	1,546	1883	1,861
1877	1,573	1884	1,787
1878	1,582	1885	1,856
1879	1,726	1886	1,866
1880	1,742	1887	1,973
1881	1,817	1888	2,091

The increase of 578 during the period bearing but a small proportion of what might have been expected from the large increase in the juvenile population of the Colony.

Reformatories.

Three institutions are maintained at the charge of the State for the reformation of children. The Shaftesbury Reformatory, for girls who are in danger of becoming habitual criminals; the Parramatta Industrial School, for girls of more tender years; and the Vernon training-ship, for boys. No reformatory exclusively for criminal boys exists; but the Vernon serves the double purpose of training-school and reformatory. The number of children in these institutions during the past ten years has been—

Children in Reformatories.

Year.	Vernon.	Biloela (now Parramatta).	Shaftesbury.	Total.
1879	124	115	4	243
1880	148	117	11	276
1881	177	130	19	326
1882	186	130	29	345
1883	213	119	27	359
1884	202	105	25	332
1885	202	106	29	337
1886	205	90	24	319
1887	203	90	26	319
1888	209	93	28	330

Industrial School.

During 1887 the industrial school for girls was removed from Biloela, Cockatoo Island, to the building formerly occupied by the Roman Catholic Orphan School, Parramatta.

The numbers of destitute children in other charitable institutions during the last ten years were as follows:—

Children in Asylums.

Year.	Orphan Schools.	Randwick Asylum.	Benevolent Asylum.	Infants' Home.	State Children's Relief Department.	Total.
1879	574	641	191	77	....	1,483
1880	552	639	177	46	52	1,466
1881	546	671	147	47	80	1,491
1882	442	643	156	50	222	1,513
1883	339	545	161	31	426	1,502
1884	150	352	149	54	750	1,455
1885	108	199	122	32	1,058	1,519
1886	*	254	130	35	1,128	1,547
1887	....	267	101	23	1,263	1,654
1888	....	246	168	56	1,291	1,761

* Orphanages closed in this year.

Destitute adults.

The number of destitute adults wholly or in part supported by the State as inmates of the various asylums of the Colony at the close of the year 1888 was 2,341, of whom 1,820 were men, and 521 women. The great majority of those in the asylums are persons of very advanced years and unable to work. The inmates of the Benevolent Asylum, Sydney, however, form an exception this rule, as a large proportion of them are destitute women ho use the institution as a lying-in hospital. The number of men nd women in the various institutions with the ratio per 1,000 of dult population at the close of each of the past ten years was—

Adults in Benevolent Asylums.

Year.	Males.	Females.	Total.	Per 1,000 of Adult Population.		
				Male.	Female.	Total.
1879	1,044	368	1,412	3·79	1·66	2·84
1880	994	382	1,376	3·45	1·65	2·65
1881	985	375	1,360	3·26	1·54	2·49
1882	980	402	1,382	3·11	1·59	2·44
1883	1,282	408	1,690	3·85	1·52	2·81
1884	1,363	435	1,798	3·88	1·55	2·84
1885	1,366	400	1,766	3·65	1·35	2·63
1886	1,504	448	1,952	3·84	1·44	2·78
1887	1,711	471	2,182	4·20	1·46	2·99
1888	1,820	521	2,341	4·28	1·55	3·08

The following are the number of adults remaining in the various enevolent Asylums at the close of the years 1879 to 1888,—

Adults in the various Asylums.

Year.	Sydney (Pitt-street).	Newington.	Liverpool.	Parramatta.		Maitland.	Newcastle.	Singleton.	Total.
				George-street.	Macquarie-st.				
1879	92	262	756	254	18	13	...	17	1,412
1880	77	288	707	259	22	12	...	11	1,376
1881	73	277	724	237	20	13	...	16	1,360
1882	88	284	733	219	30	13	...	15	1,382
1883	107	292	724	267	268	16	...	16	1,690
1884	115	312	724	339	276	16	...	16	1,798
1885	88	304	710	342	292	16	...	14	1,766
1886	83	331	741	421	297	35	27	17	1,952
1887	77	366	767	644	258	35	20	15	2,182
1888	97	397	778	721	286	36	26	...	2,341

The Liverpool and Parramatta (2) Asylums are homes for nales, and the Newington and Sydney Benevolent Asylums for emales.

Adding together the numbers of adults and children in order to show the proportion, as compared with the whole population, of those dependent on the State for support, the ratios per 1,000 for the last 10 years, are found to be as follows:—

Paupers.

Year.	Children.	Adults.	Total.	Per 1,000 of		
				Children under 12 years.	Adult Population.	Total Population.
1879	1,726	1,412	3,138	8·11	2·84	4·42
1880	1,742	1,376	3,118	7·83	2·65	4·20
1881	1,817	1,360	3,177	7·78	2·49	4·08
1882	1,858	1,382	3,240	7·64	2·44	3·99
1883	1,861	1,690	3,551	7·23	2·81	4·14
1884	1,787	1,798	3,585	6·59	2·84	3·97
1885	1,856	1,766	3,622	6·46	2·63	3·78
1886	1,866	1,952	3,818	6·21	2·78	3·81
1887	1,973	2,182	4,155	6·31	2·99	3·98
1888	2,091	2,341	4,432	6·42	3·08	4·08

Increase due to depression.

The increase noticeable during some years is probably due to the defective seasons experienced from time to time throughout the Colony, and the consequent closing of avenues of income which remained open to some of these old people, in more favourable times. The proportion of paupers to the whole population shown in the above table will appear extremely small compared with that of other countries. The proportion of population in the United Kingdom dependent upon the State for support was, at the beginning of the year 1887—

England	31·5	per thousand.
Scotland	23·5	,,
Ireland	23·2	,,
United Kingdom	29·3	,,

as against 4·1 per thousand in this Colony, a state of things plainly illustrating the happier lot of the people of Australia.

Treatment of insane.

The treatment of the insane has been dealt with under the head of Vital Statistics. The average number of insane persons resident in hospital during the year was 2,814, while the total number under care was 3,459. These numbers include those resident the Private Asylum. The various institutions for the insane in the Colony which are sustained by the Government cost the State during 1888 the sum of £71,848, equivalent to a weekly cost of 10s. 2d. for each patient, and an annual expense per head of population of 1s. 4d. This sum is quite apart from private collections, which amounted to £10,659, so that the actual expenditure on the insane in Government Asylums during the year was £82,507, which equals a weekly cost of 11s. 8d. for each patient. The treatment meted out to the insane is that dictated by the greatest humanity, and the hospitals are fitted with all the conveniences and appliances which modern science points out as most calculated to mitigate or remove the affliction under which these unfortunates labour.

Cost of asylums for insane.

A Board is in existence for the protection of the Aborigines, and in order that its operations in the way of instruction and relief in various forms should be successfully carried out, the amount voted last year was £7,711. The Aborigines are referred to at length in the part dealing with population and vital statistics.

Aborigines Protection Board.

The total expenditure of the State in connection with all forms of relief and in aid of hospitals and other charitable institutions amounted in 1888 to £212,125; adding to this the amount of private subscriptions, &c., the poor and the unfortunate have benefited during the year to the extent of nearly £300,000. This sum, though not excessive in proportion to the population, may yet appear large in view of the general wealth of the Colony, which should preclude the necessity of so many seeking assistance; and there is the risk that the charitable institutions may encourage the growth of the pauper element, for while free quarters and free food are so accessible there is the temptation to those who are disinclined to work to live at the public expense.

Public and private expenditure in charity.

It will have been gathered from the foregoing pages that in its anxiety to foster material progress, the State has not overlooked the care of those whom old age or misfortune has afflicted, nor

Material and intellectual progress.

Intellectual progress.

The intellectual progress of the people has
rapid than their material advancement. Nor
been confined to those sciences which are neces
prosperity. The State, conscious of the value
softening the minds and manners of the people,
great liberality the establishment of libraries a
In spite of their busy lives, the colonists of New
done something towards increasing the genera
English literature, and with less stirring times—
building-up of a nation—and the existence of a
fruits of the care now lavished upon intellectu
found in literature worthy of Australia.

Destiny of Australia.

More truly can it be said of the Australians
people that their destiny is in their own hands.
most happily situated. Unlike most other la
danger from no enemies upon its border, nor is it
Government should ever engage in a struggle
liberties of its people. Its colonization in these
a future free from old world strifes and traditi
thus, happy in its situation and most fortunate
may await its future in calm confidence.

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Dest
of A

INDEX.

e River, 52
Transportation, 23, 27
362
d Number of, 363
n Board, 739
11
nts in Benevolent Asylum, 387
d Surplus, 593
Duties, 213
ade on Crops, 636.
lleges, 673
ne, 422
ns Arrested, 518
ners in Gaol, 535
eople, 368
and Land, 215
232
nent in, 428
Implements, 278
r Duties, 210
f Crown Lands, 215
posits, 234
ning, 71, 75
Coal, 106
108
d Revenue, 581
e Legislation, 360
2
Privy Council, 541
ls, Indigenous, 132
ivation, 231
Enclosed, 231
Land Sold, 216
Unalienated, 226
South Wales, 35
he Police, 516
kenness, 523
ummarily dealt with, 515
Departures by Sea, 342
688
ater, 64
5
olunteer, 697
, 698
egislative, 560
for, 565
of Members of, 562

Assessment, Municipal, 704
Assets of Banks, 627
  of City of Sydney, 716
  of Investment Companies, 633
  of Life Assurance Companies, 642
  of Municipalities, 717
Assisted Immigration, 346
  Immigrants, First Arrival of, 21
Astronomer, Government, 683
Asylums, 730
Atkins, Judge Advocate, 15, 17
Attendance at Divine Service, 691
  at Sunday Schools, 694
Auction Sales, Crown Lands, 223
  Limitation of, 577
  Revenue from, 576
Australasia—Banking Transactions, 620
  Birth Rate, 381
  Chinese in, 362
  Consumption of Intoxicants, 339
  Convictions after Trial, 531
  Cost of Education, 663
  Death Rate, 391
  Drunkenness, 523
  Expenditure, 649
  Export Trade, 165
  Gold Produced, 79
  Insanity, 420
  Loans Offered in London, 600
  Manufactories, 432
  Marriage Rate, 372
  Population of, 342
  Public Debt, 652
  Railway Expenditure, 649
  Railways in Operation, 478
  Revenue, 647
  State Schools, 661
  Taxation, 648
  Trade, 179
  Wealth, 643
  Wealth of (Private), 645
Australasian Naval Force Act, 702
Australian Agricultural Company, 94
  College, 21
  Museum, 683
  Squadron, 701

Bank of Australia—Failure of, 24
Banking, 618
Bankruptcy, 544
Banks—Assets and Liabilities, 619
    Assets and Liabilities, Australasia, 620
    Capital paid up, 618
    Coin held by, 623
    Money Deposited in, 621
    Operating in Colony, 618
    Proprietary Resources, 619
    Rate of last Dividend, 618
    Reserved Profits, 618
    Value of Coin held, 623
Banks, Sir Joseph, 3
Baptists, 693
Bark-stripping, 128
Barley—Average Production, 263
    Cultivation, 263
    Importation, 264
Barrier Range Silver Mines, 80
Barwon River, 53
Bass—Exploration of, 12
Bateman's Bay, 49
Bathurst, Lake, 40
Bathurst Road Constructed, 18
Beer—Consumption of, 337
    Duties, 210
Bega River, 45
Belubula River, 52
Belgium Large Wool Purchaser, 201
Bellinger River, 41
Benefactions to University, 674
Benevolent Asylum, 387, 730
Beverages—Consumption of, 328
Birds, 131
Births, 381
    Excess over Deaths, 384
    Illegitimate, 386
    in Australasian Colonies, 382
    of Males exceed Females, 382
Birthplaces of Insane, 422
    of Persons Apprehended, 520
    of the People, 348
Birth-rate in Australasia, 381
    in New South Wales, 384
    in other Countries, 381
    per Marriage, 380
Bismuth, 93.
Blaxland's Explorations, 18
Bligh, Governor, 14
    Arrest and Release of, 17
Blue Mountains, 37
Bogan River, 22, 54
Boiling-down begun, 24
Books in Free Library, 686
Boot Factories, 442
    hands Employed, 442
Boroughs—Value of, 708
Botany Bay, 48
Botany Bay—Discovery of, 3
Bounty—Mutiny of, 14
Bourke—Town of, 58
Bourke, Governor, 21
Breadstuffs—Average consumption, 2
    Importation, 251
    Production in Colony, 249
    Production of Foreign Countries, 2
Breweries, 444
Bridges and Culverts, 471
Brisbane—City Founded, 19
Brisbane, Governor, 19
Brisbane Water, 47
British and Foreign Shipping Tra
    143-207
British Money invested, 603
    Trade, 181
British Possessions' Trade, 197
Broken Bay, 47
Broken Hill Silver Mines, 80
    Railway, 502
Bronze Coin issued, 615
Broughton Islands, 50
Brunswick River, 40
Brush Forests, 117
Building Materials, 111
Bulli Disaster, 101
Bullion Exported, 172
Burthen of Local Taxation, 646
    of Public Debt, 650
    of Taxation, Australasia, 648
Bushranging Act Passed, 20
Butter and Cheese, 314
    Districts Producing, 315
    Made and Imported, 315
Byron Bay, 46

Cabinets, 555
Cabs and Public Vehicles, 508
Cainozoic Formation, 65
Calamine, 93
Candle Factories, 444
Capital of Banks, 618
    Expended on Railways, 477
    of various Countries, 627
Capital Punishment, 531
Carboniferous Formations, 62
Carpentaria Discovered, 2
Castle Hill Revolt, 13
Castlereagh River, 54
Cattle, 301
    Breeds of, 302
    Cast of, 304

Discovered Wild, 11
of, 303
ferent Nations, 304
f Death, 404
f Insanity, 424
Volunteer, 698
New South Wales, 62
la, Lake, 55
arieties of, 117
ation of Population, 348
Division, Crown Lands, 219
Land suitable for, 234
te of Protection—Patents, 463
ip of Press Abolished, 19
equest to University, 675
le Institutions, 726
, 725
ade and Imported, 315
's Asylums, 732
of School Age, 658
to a Marriage, 380
s, Price of, 87
a Market for Wool, 298
Immigration, 360
ralized, 358
lation, 359
vention Act," 360
in Australasia, 362
f England, 691
iages in, 376
ls, 668
ct passed, 22
, First Erection of, 18
, 93
ydney Assets, 716
nditure of, 714
Incorporated, 703
of, 716
nue, 712
ular Traffic of, 508
ts, 540
River, 41
of Colony, 56
ver, 45

sis of, 106
of, 95
ge Price of, 96–101
mption per Head, 103
mption increasing, 98
ngs of Miners, 97
rt of, 104
Discovery of, 94
Consumption, 103
ures, 62
g in Northern District, 97
g in Southern District, 98

Coal—Mining in Western District, 99
    Number of Miners employed, 96
    Output of, 94
    Strike of Miners, 97
    Total Quantity Extracted, 95-102
    Value of, 101
    Wealth of Colony in, 105
Coastal Region, 40
    Climate of, 56
    Valleys, Rich Soil of, 232
Cobalt, 93
Cobar Copper Mines, 88
Coffee, Consumption of, 327
Coila, Lake, 49
Coin held by Banks, 623
    in Circulation, 613
    in Circulation in various Countries, 617
    Issued by Mint, 614
    Withdrawn from Circulation, 615
Coinage—Bronze issued, 614
    Minted, 614
Colleges Affiliated to University, 673
Colo River, 44
Colonial Pine, 118
Colonial Sugar Company, 273
Commerce and Shipping, 140
    Early Records of, 140
    Vessels entered and cleared, 141
Commercial Crisis, 23
Committals and Convictions, 528
    for Trials Decreasing, 528
Companies, Financial, 632
Compulsory Education, 659
Conditional Leaseholds, 218
    Leases in Central Division, 220
    Purchases, Unpaid Balances, 226
    Purchases, Central Division, 220
    Sales, Revenue from, 578
Conditions of Fencing, 218
Congregationalists, 693
Constitution Act passed, 30
    of Legislative Assembly, 560
    of Legislative Council, 559
Construction of Great Western Road, 469
Consumption of Intoxicants, 524
    of Fresh Meat, 326
    of Spirits, 336
    of Wine, 337
Convictions after Trial, 529
    in Australasian Colonies, 531
    in Magistrates' Courts, 528
Convicts—Number Sent to Sydney, 23
    Refused a Landing, 26
Cook's Description of Aborigines, 3
    Encounter with Aborigines, 4
    Voyage, 2

Copper, 86
  Principal Deposits of, 86
  Produce of Colony, 89
Copper Mining, Future of, 88
Copyright, 464
Cost of Carriage by Road and Rail, 472
  of Defence, 695
  of Education, 662
  of Food Supply, 325
  of Living, 333
  of Public Works from Revenue, 598
Council—Executive, 555
  Legislative, 19, 559
  New Constitution of, 23
  Nominated, 19
Country Libaries, Free, 687
Country Municipalities, 709
  Expenditure of, 715
  Revenue of, 712
  Water Supply, 719
Cowal Lake, 55
Cowper, Sir Charles, 30
Cox River, 43
Cretaceous Formation, 64
Crews of Vessels, 150
Crime, 515
  Effect of Education, 522
  in Australasia, 531
Crimes of Aborigines Provoked, 365
Criminals, 515
  Dealt with by Magistrates, 515
  Executed, 532
Criminal Jurisdiction, 543
  Lunatics, 426
Crisis—Commercial, 23
Crops—Liens on, 636
  Principal, 236
  Quantity and Value, 236
Crown Lands Act of 1861, 215
  Acts of 1884 and 1889, 216
  Revenue, 224
Cudgellico, Lake, 55
Cultivation—Principal Crops, 235
  Area Under, 235
Culverts, 471
Cunningham's Explorations, 20
Currency, 612
  of Principal Countries, 624
Curtis, Port—Surveyed, 19
Customs Revenue, 209
  of Colonies, 213
  for 10 Years, 214
Customs Duties, 208

Dairy Cows, 313
  Farming, 313
Dairy—Farm Hands, 314
  Produce, 315
Dampier's Voyage, 2
Darling River, 53
  Explored, 22
Darling, Governor, 20
  Unpopularity of, 21
Darwin's Prophecy, 6
Deaf and Dumb and Blind, 669
Deas Thomson, E., 30
Death Rate, 392-5
  of Australasia, 391
  of Cities, 403
  from 1871 to 1888, 400
  of Children Under Five Years, 396
  of Persons Over Five Years, 396
  of Insane, 420
  Quinquennial Periods, 398
Deaths, 391
  Causes of, 404
  Children, 401
  During each Season, 394
  in Australasian Colonies, 392
  in Gaols, 540
Debt—Public, 594
  Per Head of Population, 596
Decline of Export Trade, 167
Debtors in Confinement, 539
Defence, 695
  Cost of, 700
Deficiency of Wheat, 248
Deficit, 594
  Proposals to meet, 594
Degrees conferred by University, 675
Deniliquin to Moama Railway, 501
Denison, Governor Sir William, 32
Denominational Colleges, 678
Deposits in Bank, 621
  per Head of Population, 631
Destiny of Australia, 740
Destitute Adults, 737
  Children, 732
Destruction of Timber, 124
Devonian Rocks, 62
Diamond Drills, 64
Diamonds, 110
Dingo, 130
Discount, Bank Rate of, 650
Discovery by Dutch Explorers, 1
  of Murray River, 19
  of Murrumbidgee, 19
  of Gulf of Carpentaria, 2
  of New Zealand, 2
  of Tasmania, 2
Diseases—Classification of, 404
Dismissal of Cabinet Ministers, 556
Distribution of Sexes, 366

n of Wealth, 645
urts, 543
ange, 36
vice, attendance, 691
ersons Remarrying, 379
79
mmodation, 157
Slips, 157
r., 30
ss, 523
se of, 526
al, 526
ales, 524
Arrested for, 524
Climate, 58
River, 53
coveries, 1
toms, 208

f Railways, 584
nways, 504
ers, 611
ivision—Crown Lands, 217
ion of Alienation, 218
atershed, 36
cal Jurisdiction, 541
—Cost of, 664
of on Crime, 522
ons Apprehended, 522
y, 653
ss of, 656
ary, 655
cal, 678
iver, 51, 54
of Volunteer Force, 698
r System of Labour, 455
y Ballot, 563
566
ipal, first, 703
nentary, 564
Act, 560
-Qualification of, 560
er on the Roll, 565
elegraphs, 514
ts—Social Recognition, 18
n of Chinese, 360

ent, 428
r with Aborigines, 4
t of School Children, 658
r—Cook's Ship, 3
w Escape of, 5
r River, 5
nt to Municipalities, 706
Corps, 697

Equity Jurisdiction, 541
Escape of Prisoners, 11
Eskbank, 92
Estates of Deceased Persons, 608
Eucalypti—Prevalence of, 114
Excise Duties on Beer, 210
    on Spirituous Liquors, 209
    Revenue from, 209
    Tobacco, 210
Executive Council, 555
Expansion Clause—Electoral Act, 562
Expectation of Life, 414
Expenditure, 648
    from Loans, 596
    of Australasian Colonies, 651
    of City of Sydney, 714
    of Country Municipalities, 715
    of Suburban Municipalities, 714
    of Sydney University, 677
    on Defence, 700
    on Public Roads, 473
    on reproductive Works, 595
    per Head of Population, 650
Exploration in Early Days, 12, 18
Exports, 165
    An Index of Production, 159
    Chief Articles of, 170, 174
    Depreciation in Value of, 168
    Preponderance of Home Produce, 166
    Value per Head, 167, 170
Export of Animal Products, 175
    of Bullion, 168, 172
    of Coal, 172
    of Home Produce, 173-4
    of Raw Material, 173
    of Silver and Silver Lead, 172
    Trade of Australasia, 165
Extension of Local Government, 703
Extirpation of Noxious Animals, 324

Factories and Works, 433
    Average value of, 434
    Hands Employed, 435
    Power of plant, 435
Famine Imminent, 10
Farming commenced, 10
Fauna, 129
Federal Company (Irrigation) 65
Federation Proposed, 30
Felons under Arrest, 534
Female Wage Earners, 429
    Employed in Factories, 440
    Offenders, 536
Fencing Clause Lands Act, 218
Fermented Liquors Consumed, 338, 523

Ferries, 471
Finance and Public Wealth, 567
Financial Position of Australasia, 643
Fines—Cases in which Inflicted, 527
  Punishment in default of, 527
Fire Brigades Act of 1884, 639
Fire Clays, 111
Fire Risks, 638
First Fleet—Arrival of, 7
Fishes, 133
  Classification of, 134
  Destructive, 136
Fisheries Commission, 136
Fishing Industry Neglected, 136
Fish River Caves, 62
Fitzroy, Governor, 25
Flinders Explorations, 12
Flocks and Herds of the World, 301
Flood, Hon. E., 31
Flora, 112
Flour—Average Import of, 251
  Manufactured in Colony, 450
Flour-mill Power, 450
Food Consumption General, 330
  Consumed in New South Wales, 327
  Consumed in Australasia, 328
  Imported, 331
  Might be grown in Colony, 332
  Supply, 325
Forbes, Sir Francis, 19
Foreign Tonnage Registered, 155
  Trade, 198
Forests, 113
Forest Conservation, 124
  Rangers, 125
  Reserves, 124
  Revenue From, 125
  State Nurseries, 126
Fortifications, 702
Foundation of Colony, 9
Foveaux, Lieutenant-Colonel, 17
France, Trade With, 203
Franchise—Qualifications, 32
Free Public Library, 684
  Cost of Maintenance, 687
  Number of Visitors, 686
Free Selection before Survey, 216
French Expedition—Arrived, 9
French Settlement Suspected, 20
Freshwater Fish, 137
Fruit Importation, 278

Gaols, 532
  Death Rate in, 540
Gasworks, 721
Gems, 110
General Assembly, 560
Geographical Society, 682
Geological Formation, 61
George, Lake, 40
George's River, 44
Germany—Trade with, 204
Gipps, Governor, 22
Gold, 70
  Alluvial, 71–75
  Arrival of first Nuggets in Sydney,
  Decline of Alluvial Mining, 76
  Discovery of, 27, 70
  Exported to America, 201
  Mining, 67
  Produce of Australasia, 79
  Quantity Coined since 1851, 79
  Reefs recently Discovered, 78
  Specific Gravity of, 77
  Weight of Quantity Minted, 613
  Western Australia—in, 80
Goods Traffic—Railway, 496
  Revenue from, 500
Goulburn River, 43
Government—Constitution of, 561
  Employés, 460
Government Securities redeemed, 594
Governor—Commander-in-Chief, 554
Governors of Colony, 33
Grain—Consumption of, 264
  Minor crops, 265
  Production of, 264
Granite, 111
Grants of Land, Abolished, 22
Grape Cultivation, 275
Grasses, sown, 266
Great Barrier Range, 39
Grey Range, 39
Grose, Major, 11
Grose River, 44
Growth of the Public Debt, 594
Gunyalka Lake, 55
Gwydir River, 53

Habitual Drunkenness, 526
Harbours and Ports, 45
Hardwoods, 119
Hargraves—Gold discoverer, 70
Hastings River—Area Drained by, 42
Haulage on Railways, 498
Hawkesbury—Farming on, 11
  River—Area Drained by, 43
  River Bridge, 480
Hay—Wheaten, 243

y Chamber proposed, 30
Opposition to, 31
ools, 668
iinational, 678
d Leases, 222
(Rural Settlement), 226
ge Area of, 227
rious Sizes, 230
eding, 315
Classification of, 317
ts for, 317
er of, 316
ent of, Declining, 175
Cases—Number of, 727
—Accommodation, 726
-rate in, 728
sane, 419
Expenditure on, 729
Explorations, 19
xplorations, 19
ver, 50
aptain, Governor, 11
ort, 47
iver, 42
ered, 11

ormation, 66
Lake, 49
f Railway, 482
cy, 386
ign countries, 389
ted Kingdom, 388
in each Colony, 657
sing, 659
ts—Assisted, 347
laces of, 347
ncouraged, 19
ion—Assisted, 346
nese, 360
tinued, 347
Gold Discovery, 67
Vote in Aid of, 21
Garrison, 695
Vessels on Station, 701
266
nd Exports, 159
per ton Measurement, 147
-Classification of, 162
ared with Loan Expenditure, 160
d Exports, 160
me Consumption, 163
e of, 163
per Head of Population, 161
nent—Average, 535
nents on Crown Lands, 219

Improvement Purchases, 578
  Revenue from, 578
Income from Crown Lands, 575
  of Australasia, 647
  of Banks, 618
  of Boroughs, 708
  of Productive Pursuits, 611
  of Wage-earners, 611
Income per Head of Population, 612
  Private total, 611
  various countries, 612
Indian Trade, 197
Indi River, 50
Industrial Schools, 736
Infantile Mortality, 401
Infantry, 697
Influx of Insane from Abroad, 421
Insane, Admitted to Asylums, 421
  Ages and Nationality, 422
  Birthplaces of, 422
  Cost of Patients, 426
  Criminals, 427
  Death, causes of, 425
  Treatment of, 419, 738
Insanity, 418
  Causation of, 423
  in Australasia, 420
  in United Kingdom, 420
Inscribed Stock Act of 1883, 602
Insolvencies, 633
Instruction Compulsory, 654
  Science and Religion, 653
  Technical, 679
Intemperance a Cause of Insanity, 423
Internal Communication, 468
Intercolonial Trade, 182
International Copyright, 466
Interest on Loans—Rate of, 600
Interest on Public Debt, 650
Intoxicants, 338
  Consumption of, 523
    in Australasia, 339
    in various countries, 340
Inventions Registrations, 463
Investment Companies, 632
Iron, 89
  Bog Ore, 91
  Works at Eskbank, 92
  Trade Prospects, 443
  Value of Imported, 91
Ironbark—Tensile Strength of, 115, 123
Irrigation—Practicability of, 234
Islands, 50

Jackson, Port, 5, 8, 48
Japan as a market for Wool, 298

Jenolan Caves, 62
Jervis Bay, 48
Johnston, Major, 13
  Arrested by Governor, 17
Judges of Supreme Court, 540
Jury—Trial by, Introduced, 19

Kangaroos, 129
Kerosene Shale, 108
Kerosene Shale raised in Colony, 109
Kiama Harbour, 48
King George's Sound, 21
Kosciusko Mount, 50

Labour, demand for, 452
Laboratory of University, 678
Lachlan River, 52
Lakes, 40, 49
  of Western District, 55
Land and Agriculture, 215
  and Buildings in Municipalities, 606
  Average area of holdings, 227
  Cultivated or Enclosed, 231
  Due to State for purchased, 226
  Free Grants Abolished, 22
  Revenue, 224, 575
  Sold conditionally, 580
  Suited for Pastoral Pursuits, 280
  System of Alienation, 216
  Under Pastoral Occupation, 225
  Worth of unsold, 604
Lands Act of 1861, 216
Lang, Rev. Dr., 21
La Pérouse—Monument, 9
Law and Crime, 515
Lawson's Explorations, 18
Leaseholds, Conditional, 218
Leather Exported, 172
Legislative Assembly, 560
  Formed, 31
Legislative Council, 559
  Formed, 19
Length of Telegraph Lines, 514
Length of Navigable Rivers, 54
Le Receveur Pére, 9
Letters Carried by Post, 513
  of Administration, 608
  Patent, 547
  Registration of Patents, 463
Lewis Ponds Gold Co., 82
Liabilities of Banks, 628
  of Investment Companies, 632
Library—Free Public, 684
Library—Classification of Works, 685
  Lending Branch, 684
  Number of Volumes, 686
Libraries—Country, 687
Licenses—Revenue from, 573
Licensing Act Amended, 573
Liens on Crops, 636
  on Wool, 634
Lieutenant-Governor, 548
Life Assurance, 641
Life—Average Duration of, 416
  Expectation of, 414, 417
Limestone Beds, 62
Liquors, 338
  Consumption of, Australia, 339
Liquors—Consumption, other countries, 340
  Expenditure, 338
Linnean Society of New South Wales, 62
Liverpool Plains Surveyed, 22
Live Stock in New South Wales, 319
  in Australasia, 319
Loans, 594
  City of Sydney, 716
  First floated, 594
  Floated since 1858, 599
  Municipal, 715
  Provision for Extinction of, 599
  Purposes Raised, 595
Local Government, 703
Lord Howe Island, 50
Lottery Bill Passed, 24
Lucerne Cultivation, 266

Macarthur, John, 14
  Arrest of, 15, 16
Macarthur, James, 30
Macdonald River, 44
Machinery in Colony, value of, 462
  Industries employing, 462
Macintyre River, 53
Macleay, G.—Explorations, 20
Macleay River—Area drained by, 41
Macquarie, Lake, 47
  Lieut.-General, Governor, 17, 19
  Port, 46
  River, 54
Magistrates' Courts—Committals, 528
  Summary Convictions by, 526
Magnetite, 89
Mail Communication with America, 510
  Communication with Europe, 510
Main Roads, 472
Maize, 254
  Average Yield of, 255, 258

ltivated, 1862–1889, 257
al Centres of Cultivation, 256
ployed in Productive Works,
tion of Australia, 342
, 129
, 92
River, 42
ries and Works, 431
t invested, 435
e Value of, 434
cation of, 435
r of Hands in, 435–9
s Colonies, 433
4
1
rdens, 277
-Prospects of Women, 374
—in Colonies, 372
369
h Denomination, 377
ed, 379
pean Countries, 370
red in Colony, 370
s, 129
r James, 30
al Causes Act, 379
Archdeacon, 31
nsumption of, 307
d and Supply, 309, 326
s in Colony, 311
ssary Losses of, 310
—Population of, 352
93
eep—Number of, 290
Formation, 63
es Maritimes Co., 510
Iinerals, 70
hic Formation, 66
gy, 59
—Area of, 355
tan Municipal Population, 353
tan Tramways, 503
per mile, 503
, &c., Rates, 706
6
Forces, 696
ly, 314
Grain, 450
eases, 582
es, 77
-Metallic, 70
ty and value obtained, 69
l Minerals, 67
yment in, 428
Extent of enterprise, 77
n System of, 68

Ministers—Cabinet, 555
Mint—Transactions of, 614
Mitchell, Sir T.—Explorations, 22
Moama to Deniliquin Railway, 501
Money in Banks on Deposit, 621
Money Order Business, 638
Monopoly of A. A. Company, 95
Montague Island, 50
Moreton Bay Discovered, 5
  Surveyed, 19
Mort, Thomas, 31
Mortality in the Colony, 391
  Infant, 401
  Rate of, 392
Mortgages on Land, 636
  on Live Stock, 635
Moruya River, 45
Mountain Lakes, 40
  Table Lands, 36, 39
Municipal Elections, 721
  Assessment, 704
  Expenditure—City, 714
  Expenditure—Country, 715
  Expenditure—Suburbs of Sydney, 714
  Lands and Buildings—606
  Loans, 715
  Revenue—City, 712
  Revenue—Country, 712
  Roads and Streets, 717
  Works, 718
  Works—Estimated Value, 605
Municipalities Act, 703
  and Boroughs—Value, 708
  and Boroughs—Population, 705
  Annual Value of Property, 707
  Area Incorporated, 703
  Assets, 717
  Privileges, 704
Murray and Darling River Trade, 153
  River Discovered, 19
  River Length of, 50
Murrumbidgee River, 51
  Discovered, 19
  Length of, 52, 54
Museum, Sydney, 683
  Technological, 688
Mutiny of the Bounty, 14
Myall Lake, 49
Myall River, 42

Nambuccra River, 41
Namoi River, 54
National Art Gallery, 688
Nationality of Vessels Trading, 145
Native Animals Destroyed, 131

Native-born Population, 348, 519
Naturalization, 358
Naval Brigade, 699
Naval Station, 700
  War Vessels on, 701
Naval Volunteer Artillery, 699
Nepean River, 44
  Water Supply Scheme, 718
New Caledonia, Trade with, 202
Newcastle Coal Seams, 63
  Founded, 12
  Harbour and Shipping, 47
  Tonnage of Vessels, 152
Newcastle, City of, 154, 357, 710
New Hebrides Discovered, 1
New Holland, 3
New South Wales, area of, 35
  Corps—Constitution of, 12
  Founded, 9
  Limits of, 34
New Zealand Discovered, 2
Non-residential Purchases, 218
New Zealand Trade, 195
Night Refuge, 732
Norfolk Island, 10, 50
Note Circulation, 625
Noxious Animals, 323
Nursery State, for Timbers, 126
Nymagee Copper Mines, 88

Oaten Hay—Demand for, 262
Oath of Allegiance, 562
Oats, 258
  Area under Cultivation, 259
  as Fattening Food, 261
  Yield in Australasia, 260
  Yield in Colony, 259
  Yield in other Countries, 261
Observatory, Sydney, 683
Offences—Classification of, 527
Offenders Convicted more than once, 536
Omnibus Traffic, 508
Orange Cultivation, 276
Orangeries, 277
Oranges—Exportation, 277
Orchards, 277
Out-door Charitable Relief, 728
Overland Trade with Queensland, 190; with South Australia, 192; with Victoria, 187
Oysters, 137

Palæozoic Formation, 61
Pammaroo, Lake, 55
Parkes, Sir Henry, 31
Parliamentary Elections, 566
Parliament—Duration of, 564
  Elections for, 566
  First Meeting of, 563
  Summoning, 552
  Voters, 565
Paroo, River, 54
Passenger Traffic, Railway, 491
  Receipts of, 494
Pastoral Employment, 430
  Leases, 221
  Occupation, 581
  Occupation—Rent Paid, 580
  Property Value, 319
Patents, 463
Paterson, Colonel, 17
Paterson River, 43
Payment of Members, 562
Permanent Artillery, 696
Personal Property, 607
Persons in Charitable Institutions, 731
Phillip, Captain—Governor, 7
  Return of, to England, 11
Phylloxera, 276
Physical Configuration, 36
Piddington, W. R., 31
Pigs, 318
Pine—Colonial, 118
  Strength of, 119
Pittwater, 47
Plant in Factories, 435
Plants—Classification of, 113
Platinum, 93
Platypus, 130
Police—Duties performed by, 517
  in Australasia, 517
  in different cities, 518
Poll-tax—Evasion of Chinese, 361
Population—Aborigines, 363
  Ages of, 368
  Average Increase of, 342
  and Vital Statistics, 341
  Birthplaces of, 348
  Centralization of, 349
  Compared with Victoria, 344
  Increase of, 344
  Marriage Rate of, 370
  of Australasia, 342
  of Chief Cities, 352
  of Country Municipalities, 357
  of New South Wales, 343
  of Sydney, 353
  of Suburbs, 355
  Racial composition of, 348
Port Hunter, 47
Port Jackson, 5, 8, 48
Port Macquarie, 42, 46

llip Separated, 25
hens, 46
Telegraphs, 509
ferent countries, 513, 514
ce Banks, 632
oyés, 511
rs and papers carried, 512
usiness, 509
oney Orders, 638
, 266
Cultivated, 267
mption of, 327
rtation of, 328
, 266
Plant in Factories, 435
ive of Mercy, 553
rian Church, 692
ensorship Abolished, 19
el of Exports, 168
Education, 653
532
s, Ages of, 535
ebt, 539
ously Convicted, 537
ctory, 539
Assignments, 633
tedness, 637
of Railway, 477, 501
ls, 666
th, 606, 644
rves, 158
uncil Appeal, 541
, 608
ndex of Wealth, 609
Exported, 173
ve Pursuits, 611
of Education, 657
of Sheep-breeding, 283
ed Class, 725
left by Persons Deceased, 608
Qualification, 561
on of Males and Females, 368
Reservoir, 718
on Board, Aborigines, 739
onveyances, 508
, 594, 598
e—Value of, 605
nditure of Australasia, 648
uction, 659
urces—Value of, 595
nue, 568
ls Act, 1866, 653
l Boards, 662
lth, 604
ks—Value of, 605
Houses, 574
ent—Capital, 531
Punishments by Magistrates, 526
Punts and Ferries, 473
Purchases on Gold-fields, 224

Qualification of Electors, 560
Quartz-mining, 73
    Revival of, 76
Queensland Separated, 25
    Trade, 187
Quiros, Don Pedro de, 1

Rabbits, 323
Railways, 474
    Accidents on, 505
    Analysis of Goods Traffic, 496
    Average Distance Travelled, 492
    Average Earnings from Goods, 499
    Average Fare per Mile, 493
    Average Fare per Passenger, 493
    Capital Expended on, 477
    Cost of Construction, 485
    Distribution of Working Expenses, 488
    Earnings and Expenditure, 584
    Earnings and Working Expenses, 487
    Expenditure of Colonies, 649
    Extension to Circular Quay, 481
    First Line of, 474
    Gross Earnings and Expenses, 487
    Growth of Traffic, 482
    Haulage per Ton, 498
    Illawarra Line, 482
    in Other Countries Compared, 490
    Interest on Capital, 489
    Journeys per Head of Population, 491
    Length Open for Traffic, 478
    Light Lines, 484
    Lines Authorized, 500
    Lines Opened each Year, 475
    Lines in Construction, 500
    Loss on New Lines, 483
    Passenger Traffic, 491
    Population per Mile of, 476
    Private Lines, 477, 501
    Projected Branch Lines, 480
    Receipts from Goods Traffic, 500
    Receipts from Passenger Traffic, 494
    Revenue, 582
    Rolling Stock, 501
    Southern Lines, 478
    Systems of the Colony, 478
    Tonnage of Goods Carried, 498
    Tonnage in Various Countries, 497
    Transfer to State, 474

Rainfall, 59
  Influence on Crops, 238
Ratable Property in Boroughs, 708
Rate of Interest, Banking, 629
Receipts from Taxation of Australasia, 647
Re-export Trade, 176, 178
  Overland Trade, 178
Reference Libraries, 684
Reformatories, 680, 735
Refractory Prisoners, 539
Refund of Crown Land Deposits, 580
Religion, 653, 689
  Number of Adherents to, 690
  of persons apprehended, 521
  State Aid to, 689
Religious Equality established, 22
Rental, Crown Lands, 221
Reptiles, 139
Reserved Profits of Banks, 618
Residence Clause, Lands Act, 218
Responsible Government, 560
  Established, 30
Revolt at Castlehill, 13
Revenue—Accumulated Surplus, 593
Revenue—Classification of, 568
  Crown Land Auction Sales, 576
  Customs and Excise, 208
  from Pastoral Occupation in various years, 581
  from Public Lands, 224
  from Railways, 582
  from Taxation, 571
  from Tobacco, 211
  from Various Services, 583
  in Various Years, 568
  of Australasian Colonies, 567
  of City of Sydney, 708, 712
  of Country Municipalities, 709
  of New South Wales, 568
  of Suburban Municipalities, 708
  per Head of Population, in Australasia, 647
  for the Year 1825, 567
Rewards for Noxious Animals, 323
Richmond River, 40
Riverine Country, 288
Riverine Ports—Trade of, 154
Rivers of Coastal Regions, 40
  of Western Watershed, 50
  Traffic on, 153
Roads and Bridges, 472
  and Streets, 473
  Expenditure on, 473
  Supervision and Maintenance, 470
Road—Great Western, 469
Robertson, Sir John, 215
Rocks—Classified, 61
Rolling Stock of Railways, 501
Roman Catholic Church, 692
  Marriages, 377
  Schools, 667
Royal Geographical Society, 682
Royal Society of New South Wales, 6
Royalty on Timber, 127
Rubies and Gem Stones, 110
Rum Currency, 15
Rum—Importation of, 12
  Sale of, Prohibited, 13
Rye Grass, 266

Sales of Inscribed Stock, 602
Salubrity of Climate, 56
Salvation Army—Property of, 693
Sandstone Formation, 111
Savings Banks, 632
  for Schools, 666
Schnapper Fisheries, 134
Schools in Australian Colonies, 661
Schools—Church of England, 668
  Cost of, 662
  Denominational, 668, 678
  Enrolment, 660
  Establishment of, 17
  For Engineering, 673
  High, 668
  Industrial, 732
  Medical, 673
  Number of State, 661
  Private, 666
  Roman Catholic, 667
School Boards, 662
School Teachers—Training of, 662
Schools' Savings Banks, 666
Science, 678
Scientific Societies, 681
Scrub Forests, 118
  Leases, 223
Secondary Education, 655
Second Fleet—Arrival of, 10
Selection—Free before Survey, 216
Selling Price of Australian Stocks, 60
Senate of University, 671
Services—Revenue from, 583
Settlement in Early Days, 468
Settlers—Arrival of Free, 19
Sewerage of Sydney and Suburbs, 72
Sexes—Distribution of, 366
Shale Deposits, 108
  Production and Value of, 109
Sheep, 280
  and Cattle Runs, 287
  Breeds of, 289

xport and Import of, 285
se of, 283
hrough drought, 284
er in Australasian Colonies, 286
ess of breeding, 283
ding, 156
er for, 115
—Average Tonnage, 149
Records of, 140
gn and British, 143
of Australasia, 142
of Newcastle, 152
of Riverine Ports, 154
of Sydney, 152
y, 46
en River, 44
Drained by, 45
Rocks, 62
0
in 1888, 81
Withdrawn, 615
sits in Barrier Range, 80
in New England, 82
ber of Miners engaged, 83
ction of, Increasing, 83
tity Exported, 83
yage of, 10
, 80
ay to Broken Hill, 502
ported, 172
11
ring for Food, 312
x, 418
nd Reptiles, 139
ange, 37
, 45
Candle Factories, 445
ndition, 725
ds, 117
Agriculture, 232
ble for Cereals, 234
ble for Fruit Growing, 233
Island, 50
, 266
tchen, 732
Watershed, 37
stralian Trade, 190
asses, 266
Areas, 219
s, 224
, 224
Duties, 209
ity of Timber, 123
Consumption of, 336
nue from, 209
ct to Excise, 209
c in, 12

- Stamp Duties, 571
- Starvation Threatened, 10
- State Aid to Charities, 725
  - to Denominational Schools, 653
  - to Education, 669
  - to Forests Reserves, 126
  - to Religion, 689
  - Children's Relief, 726
  - Schools, 659
- Steam and Sailing Tonnage, 145
  - Communication with England, 509
  - Power in various countries, 462
- Stephens, Port, 46
- Still Wine—Duty, 209
- Stock, 279
  - Annual Cast of, 308
  - Breeding—Beginning of, 279
  - Carrying Capacity of Colony, 286
  - Price of Fat, 313
  - Rate of increase, 306
  - Number in Colonies, 320
  - Water Conservation for, 311
- Stocks—Improvement in Value of, 601
- Streets in Municipalities, 473
- Stringency of Bankruptcy Act, 633
- Students—Technical College, 679
  - at the University, 676
- Stud Sheep—Importation of, 282
- Sturt, Captain—Explorations of, 20
- Submarine Telegraph Cables, 509
- Subsidies to Mail Contracts, 510
- Suburban Expenditure and Revenue, 708
- Suburbs of Sydney, 355
- Sugar-cane, 270
  - Area in Production, 271
  - Cultivation of, 270, 446
  - Principal Centres, 272
- Sugar Consumption, 328
  - Growing, 446
  - Mills, 446
  - Refineries, 447
  - Revenue from Imported, 213
- Suicides, 412
  - in Australasia, 414
- Summary Convictions, 516
  - Summary of Forces, 699
- Summoning of Parliament, 552
- Sunday Schools, 694
- Sunny Corner—Silver Mines, 80
- Superior Public Schools, 668
- Supreme Court, 540
- Surplus Assets of Banks, 619
- Swan River Settlement, 21
- Swine, 318
- Sydney—Chief Port, 153
  - Climate of, 56
  - College, 670

Sydney—Cove, 8
  Grammar School, 669
  Harbour—Area of, 48
  Observatory, 683
  Population of, 352
  Revenue and Expenditure, 712
  Tramways, 502
Systems of Land Alienation, 215

Table-lands of Colony, 36
  Climate of, 57
  Suitable for Cereals, 234
Tallow, an export, 172
Tariff, 208
Tasman's Discoveries, 2
Tasmanian Trade, 193
Taxation, 571
  Of Australasia, 648
  per Head, 570
  Revenue from, 571, 648
Tea Duties, 212
  Consumption of, 327
Teaching Staff of University, 675
Technical College, 679
  Number of Students, 679
  Workshops, 680
Technical Education, 678
  Cost of, 680
Technological Museum, 688
Telegraphs, 513
  In different Countries, 514
  Lines in Operation, 514
  Submarine Cables, 509
Tellurium, 94
Temora Gold-field, 75
Temperature and Climate, 56-59
Tensile strength of Timber, 119
Tenure of land—Eastern Division, 218
  Central Division, 220
  Western Division, 221
Territorial Divisions, 216
Timber, compared with Foreign, 123
  Cut in State Forests, 125
  Destruction of, 124
  Export of, 121
  Large Importation of, 120
  Licenses and Permits, 127
  State Nurseries, 126
  Tensile strength of, 122
  Trees—Chief Varieties, 114
Tin—Chinese in Mines, 86
  Discovery of, 84
  Syndicates control market, 85
  Total production, 84
Tin—Value of Export, 85
Tobacco—Area and Production, 269
  Consumption of, 269
  Cultivation of, 268
  Duties on, 210
  Leaf Imported, 448
  Manufactories, 448-9
  Revenue, 211
Tonnage Arriving in Ballast, 145
  of British Vessels Trading, 144
  of Foreign Vessels Trading, 145
  of Goods Carried by Rail, 498
  of Principal Australasian Ports, 15
  of Principal British Ports, 153
  of Sailing Vessels, 145
  of Steamers, 145
  Registered in Colony, 155
  Value of Cargoes, 148
Torres, Luiz Vaez de, 1
Trade of Australasia, 179
  of Sydney, 152
  with all Countries, 205
  with Belgium, 201
  with British Possessions, 196
  with China, 204
  with Fiji, 196
  with France, 202
  with Germany, 204
  with Great Britain, 181
  with Hongkong, 196
  with India, 197
  with New Caledonia, 203
  with New Zealand, 195
  with Queensland, 187
  with South Australia, 190
  with Tasmania, 193
  with United States, 199
  with Victoria, 183
Trade in Live Stock, 176
Trades—Rate of Wages in, 452
Tramways, 502
  Accidents, 507
  Earnings and Expenditure, 504
  Interest on Capital, 503
Tramway Systems, 502
Transit of Mails, 479
Transportation—Abolition of, 23-27
Training of Teachers, 661
Treatment of Insane, 418, 738
Trial Bay, 46
Trial by Jury established, 19
Triennial Parliaments, 563
Tuggerah Lake, 49
Tumut River, 52
Tuross River, 45
Twins and Triplets, 390
Twofold Bay, 49

arbour, 48
es—Population of, 350
th, 199
670
Colleges, 674
ions, 674
onferred by, 675
tions, 674
ure, 677
land for, 673
of, 677
Medicine, 677
71
, 676
Staff, 675
ances, Crown Lands, 226
ng, 53
, 55

, 418
ports per Inhabitant, 170
ts per Inhabitant, 161
nery in Colony, 462
ipal Works, 605
al Property, 607
Estate, 605
Resources, 595
Works, 605
tes Granted, 608
le Property, Municipal, 708
Wealth, 605
Vealth, 606
112
raffic, Sydney, 502
ning Ship, 681
t in Colony, 156
and Cleared, 141
d at Sydney, 154
d at Newcastle, 154
mber Registered, 155
off Coast, 158
covered, 23
on of, 351
d, 29
th, 183
tion, 273
e Library, 685
, 683
ics, 341
orces, 696
t, 695
, 699
egulation Act, 695
ification for, 561
Wages, 452
  Average since 1830, 456
  of various Trades, 452
  Real and Money, 458
Wakool River—Length of, 51, 54
Wallabies—Number of, 129
Waljeers Lake, 55
Wallis Lake, 49
Warragamba River, 44
Warrego River, 53
War Vessels on Station, 701
Water Artesian, 64
  and Sewerage Act, Country Towns, 704
  Supply—Country, 719
  Sydney, 718
Wealth of Australasia, 643
  derived from Mines, 69
  Estimated Total, 607
  of different Countries, 644
  of New South Wales, 604
  of Victoria, 610
  Private, 606
  Public, 604
Wellington Caves, 62
Wentworth W.C., 30
  Explorations of, 18
Wesleyan Methodists, 692
Western Districts—Climate of, 58
  Lakes, 55
  Mountain System, 39
  Watershed, 37, 50
Western Division—Crown Lands, 221
  Alienation, 222
Wharves, 158
  private, 158
Wheat, 237
  and Flour Imported, 193, 252
  Area under Cultivation, 254
  Average Yield, 238-240
  Crop of the World, 247
  Districts where grown, 243
  Effect of Drought, 244
  Failure of Crop, 252
  Grown for Hay, 253
  Production unequal to demand, 248
  Season of 1889-90, 238
  Yield in Colonies, 246
Wiambene Caves, 62
Wianamatta Series, 63
Williams River, 43
Wine Duties, 210
  Area under Grape, 275
  Consumption of, 337
  Duties, 210
  Importation of, 210
  Markets for, 273
  Production, 273

Wines of Colony at Bordeaux, 275
Wollondilly, 43
Wollongong Harbour, 48
Wool, 292
    Consumption of, 299
    Decrease in Quantity, 296
    Exported, 171, 293
    Fluctuation in Value, 296-8
    Growing initiated, 281
    Liens on, 634
    Markets Available for, 298
    Maximum Price for, 297
    Produce of Various Countries, 300
    Quantity in Australasia, 299
    Shipped from New South Wales, 292
    Shipped *via* Adelaide, 293
    Shipped *via* Melbourne, 293
    Superiority of Australian, 289
    System of Preparing, 293
    Value of Clip in each Colony, 299
Wool— Weight and Value Expor
        1860–1888, 295
    Weight per Sheep, 293
Woollen Mills, 441
Working Expenses of Railways, 649
Works and Factories, 431
    Classification of, 435
    Hands Employed, 435
    in Operation, 434
    Power of Machinery, 435
Woronora River, 44
Wrecks, 158
Wyong State Nursery, 126

Yield of Gold Mines, 79

Zymotic Diseases—Deaths from, 405

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